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**SITE ASSESSMENT REPORT  
CELOTEX SITE  
WILMINGTON, WILL COUNTY, ILLINOIS  
TDD: S05-9709-007  
PAN: 7P0701SIXX**

EPA Region 5 Records Ctr.



237102



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International Specialists in the Environment

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**January 31, 1998**

**Prepared for:**

**UNITED STATES ENVIRONMENTAL PROTECTION AGENCY  
Site Assessment Section  
77 West Jackson Boulevard  
Chicago, Illinois 60604**

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## Table of Contents

<u>Section</u>		<u>Page</u>
1	Introduction . . . . .	1-1
2	Site Background . . . . .	2-1
3	Site Assessment . . . . .	3-1
4	Analytical Results . . . . .	4-1
5	Threats to Human Health and the Environment . . . . .	5-1
6	Summary . . . . .	6-1
7	Cost Estimate . . . . .	7-1
 <u>Appendix</u>		 <u>Page</u>
A	Photodocumentation . . . . .	A-1
B	Analytical Data Package . . . . .	B-1
C	RCMS Cost Estimate . . . . .	C-1

**List of Figures**

<u>Figure</u>		<u>Page</u>
2-1	Site Location Map . . . . .	2-3
2-2	Site Features Map . . . . .	2-4
3-1	Sample Location Map . . . . .	3-4

## **List of Tables**

<u>Table</u>		<u>Page</u>
4-1	Summary of Analytical Results (September 26, 1997) . . . . .	4-2
4-2	Summary of Analytical Results (December 11, 1997) . . . . .	4-5

## **1. Introduction**

The Ecology and Environment, Inc. (E & E), Superfund Technical Assessment and Response Team (START) was tasked by the United States Environmental Protection Agency (U.S. EPA), under Technical Direction Document (TDD) number S05-9709-007, to conduct a site assessment at the Celotex site, located in Wilmington, Will County, Illinois. START was tasked to prepare and implement a safety plan; review background information; collect samples; subcontract analytical services; document conditions on site; conduct air monitoring; evaluate threats to human health and the environment; and make recommendations to U.S. EPA as to the potential need for removal action, further investigation, or other actions which may be prudent. The site assessment was performed in accordance with the National Oil and Hazardous Substances Pollution Contingency Plan (NCP), 40 Code of Federal Regulations (CFR), Section 300.415, paragraph (b)(2) to evaluate on-site conditions and potential threats to human health and the environment. This report summarizes START site assessment activities.

## **2. Site Background**

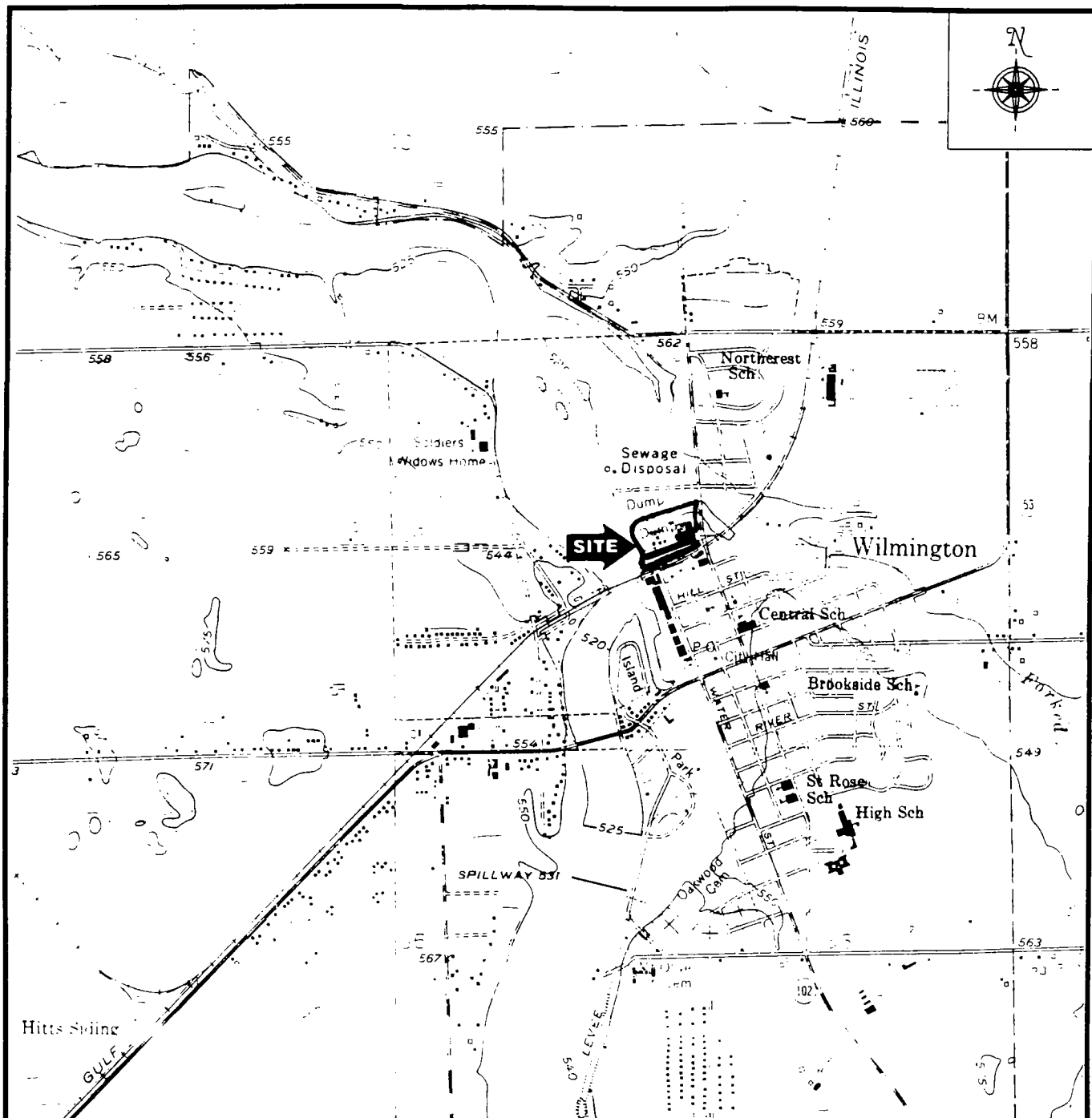
The site is located at the northwest corner of Kankakee Street and Chicago Street in Wilmington, Illinois, at geographic coordinates: latitude 41°18'76.8" north and longitude 88°08'95.5" west (Figure 2-1). The site is bordered on the north by Forked Creek, on the west by the Kankakee River, on the south by Chicago Street, and to the east by Kankakee Street and industrial facilities. The site is partially surrounded by chain-linked fence, but public access is possible through the fence, many holes in the exterior of the building, and the facility gate is not secured.

The Celotex facility was constructed in the late 1950s, and was used for production of roofing materials and as a paper mill. Celotex ceased operations in the early 1980s. The facility was purchased by Ronald Cruise, Trust Agent, in 1987, but apparently has been acquired by Will County due to nonpayment of property taxes, in June 1997. Numerous complaints by residents of Wilmington concerning the condition of the facility initiated investigations to determine whether hazardous wastes are present at the facility. An inspection in 1994 indicated that approximately twenty-five 55-gallon drums were present, some of which were leaking unknown materials with a "solvent odor." Mr. Cruise was cited in 1994 for numerous violations regarding dumping at the site, and storage of suspected hazardous waste materials. No apparent actions resulted from these citations. The buildings have been used for gang-related activities and gang graffiti is present on outside walls.

The site, comprising approximately 6 acres, contains five steel buildings (designated 1 through 5) and two concrete, aboveground wastewater clarifiers. The buildings are in poor condition, with broken windows and deteriorating roofs, and contain miscellaneous equipment and debris. Building 1 has been used by the City of Wilmington for equipment storage, and currently has approximately twenty-five 55-gallon drums stored inside. Buildings 2, 3, and 4 contain miscellaneous debris, including insulation suspected of containing asbestos. A section of Building 3 was used by a local artist as a workshop. Building 5 is apparently used for storage by a trucking firm. A landfill

containing asphalt materials used by the Celotex corporation, is located in the northwest section of the site, adjacent to the Kankakee River. Bundles of shingles have also been observed half buried along the southern bank of Forked Creek. The extent of the asphalt runs along the southern side of Forked Creek, and along the majority of the Celotex property that runs along the eastern side of the Kankakee River (Figure 2-2). The landfill was the source of numerous fires when Celotex was in operation. Another landfill, of approximately 40 acres, exists north of Forked Creek. (This area was not included in this assessment). Site background information was obtained from the Wilmington Free Press; a narrative written by James Haennicke of the Illinois Environmental Protection Agency (IEPA); information supplied by Jonathan Jones, a representative from the Wilmington Water Plant; and by site reconnaissance.





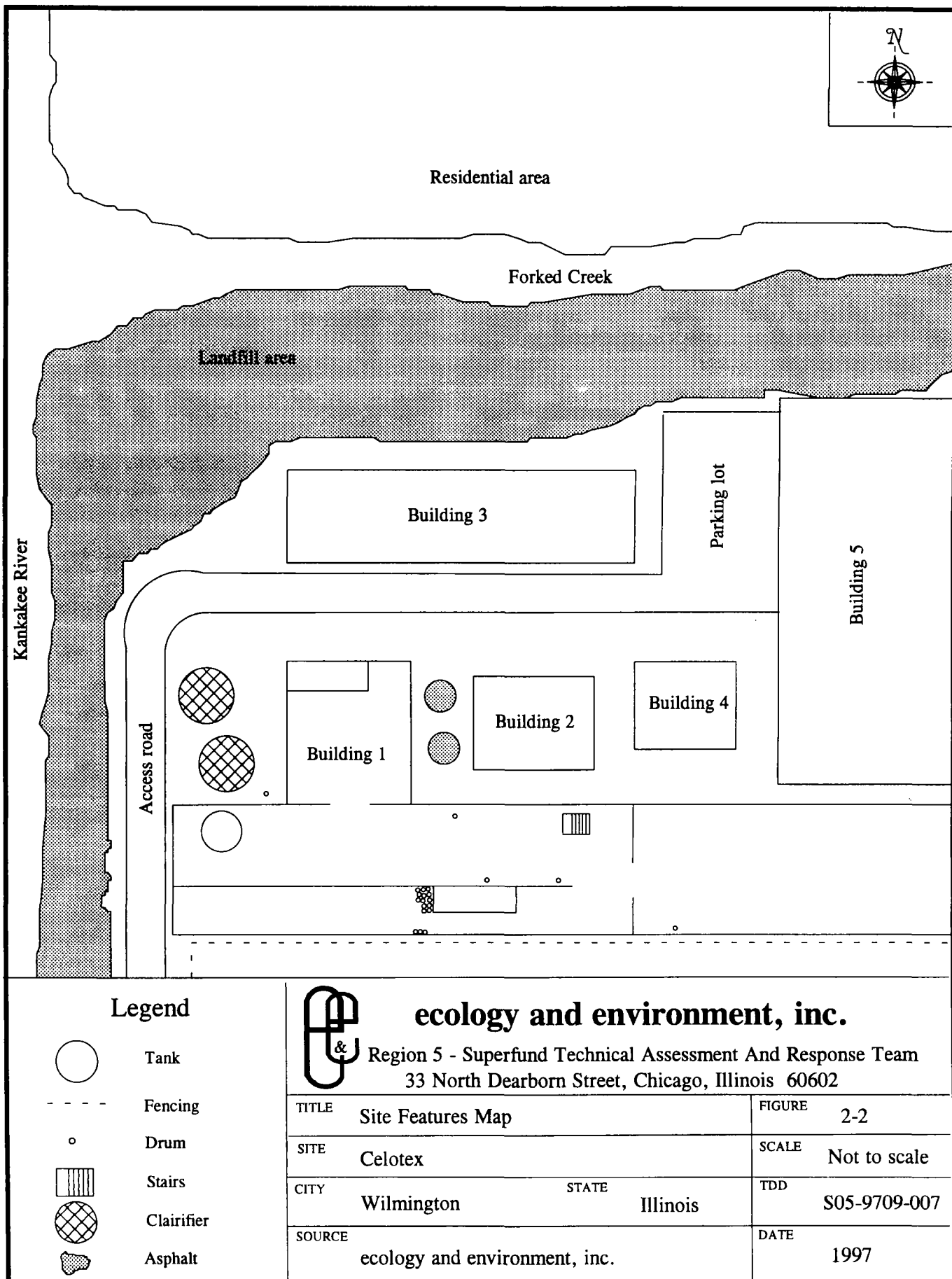
Quadrangle location



**ecology and environment, inc.**

Region 5 - Superfund Technical Assessment And Response Team  
33 North Dearborn Street, Chicago, Illinois 60602

TITLE	Site Location Map	FIGURE	2-1
SITE	Celotex	SCALE	1:24,000
CITY	Wilmington	STATE	Illinois
SOURCE	U.S.G.S. 7.5 minute series Topographical Map Wilmington, Illinois Quadrangle	TDD	S05-9709-007
		DATE	1954
		REVISED	1973



### 3. Site Assessment

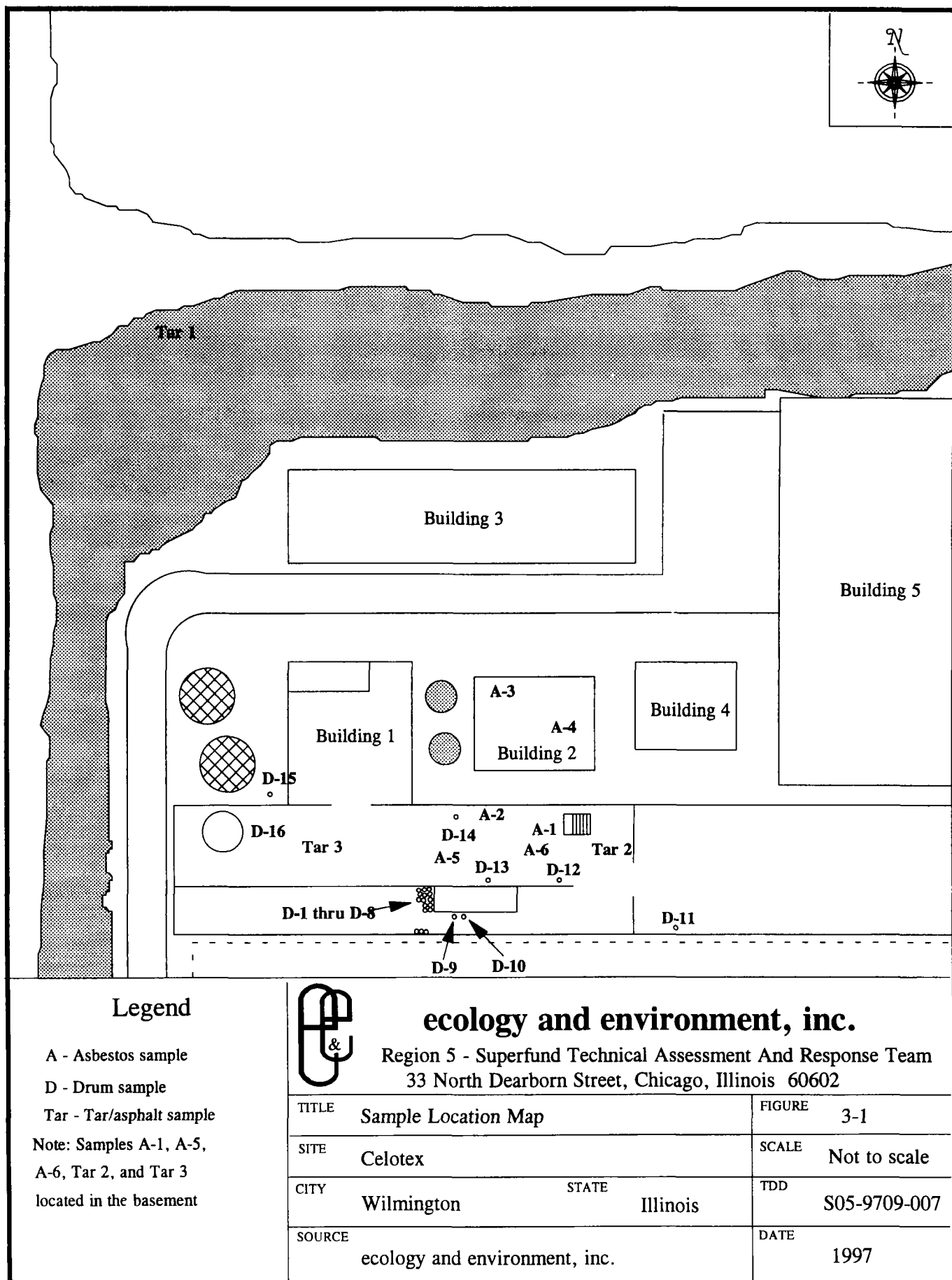
On September 26, 1997, START members Brendan McLennan and Nabil Fayoumi, and U.S. EPA On-Scene Coordinators (OSCs) Keith Lesniak and Sam Borries, mobilized to the Celotex site, arriving at 0940 hours. Weather conditions included sunny skies and temperature around 75°F. A health and safety meeting was conducted upon arrival at the site, prior to site entry. A decontamination and setup area was established in the parking lot to the north of Building 1. Background air monitoring was performed using a combustible gas indicator (CGI) and photoionization detector (PID). Both instruments were calibrated prior to use. No explosive gases or organic vapor mixtures were detected above background levels in the ambient air.

At 1000 hours, a site reconnaissance was performed to determine the condition of buildings and identify sample collection areas. Building 1 is the largest building on site and is in the worst condition of all the buildings, with crumbling interior walls and a deteriorated roof. All 55-gallon drums found on site were in Building 1. Building 2 is a small corrugated steel structure located northeast of Building 1. Garbage bags containing asbestos insulation were observed in the northwest corner of the building. Inside Building 3, there were various pieces of machinery, as well as desks and other debris from the previous business that leased the building. A section of Building 3 is being utilized by local artist Patrick Baron as a workshop. All entrances to Building 4 were boarded up and the building could not be entered during the site assessment. Building 5 is currently used by a trucking company and was not entered. An asphalt mass, estimated to contain 30,000 cubic yards, was present, in the northwest corner of the site in the old landfill, adjacent to the eastern side of the Kankakee River and along the southern side of Forked Creek, to the Kankakee Street Bridge. In all, over 1,000 feet of river and creekbank contained asphalt, either in the water or near the water, that at times of high waters could be inundated. An oil sheen was observed on the water surface, adjacent to the asphalt material. In addition to the asphalt in the old landfill, there were two additional asphalt masses on the property, as well as a layer of asphalt covering the basement floor in Building 1.

At 1020 hours, START members McLennan and Fayoumi, and OSCs Borries and Lesniak, donned Level C personal protection and entered the site to conduct additional site reconnaissance, and to collect samples from drums and areas identified during the initial site reconnaissance. While OSCs Borries and Lesniak investigated the site, START members McLennan and Fayoumi began collecting samples from 55-gallon steel drums, which were located in Building 1 (Figure 3-1). Using a drum thief, sample D-1, a thick brown liquid, was collected from a drum in the south central area of Building 1 (Figure 3-1); air monitoring of the drum contents indicated no elevated PID or CGI readings. Using a drum thief, sample D-2, a clear yellowish/brown liquid, was collected from a drum in the south central area of Building 1; air monitoring of the drum contents indicated no elevated PID or CGI readings. Using a drum thief, sample D-3, a clear orange/yellow liquid, was collected from a drum in the south central area of Building 1; air monitoring indicated no elevated PID or CGI readings. Using a drum thief, sample D-4, a thick brown liquid, was collected from a drum in the south central area of Building 1; air monitoring indicated no elevated PID or CGI readings. Using a drum thief, sample D-5, a thick brown liquid, was collected from a drum in the south central area of Building 1; air monitoring indicated no elevated PID or CGI readings. Using a drum thief, sample D-6, a light brown liquid, was collected from a drum in the south central area of Building 1; air monitoring indicated no elevated PID or CGI readings. Using a drum thief, sample D-7, a clear, viscous liquid, was collected from a drum in the south central area of Building 1; air monitoring indicated no elevated PID or CGI readings. Using a stainless steel trowel, sample D-8, a white powder, was collected from a drum in the south central area of Building 1; air monitoring indicated no elevated PID or CGI readings. Using a drum thief, sample D-9, a thick brown liquid, was collected from a 5-gallon pail in the south central area of Building 1; air monitoring indicated no elevated PID or CGI readings. Using a drum thief, sample D-10, a thick brown liquid, was collected from a 5-gallon pail in the south central area of Building 1; air monitoring indicated no elevated PID or CGI readings. Using a drum thief, sample D-11, a cloudy brownish liquid, was collected from a drum in the southeast corner of Building 1; air monitoring indicated no elevated PID or CGI readings. Using a drum thief, sample D-12, a brown oily liquid, was collected from a plastic drum in the north central area of Building 1; air monitoring indicated no elevated PID or CGI readings. Using a drum thief, sample D-13, a brown oily liquid, was collected from a drum in the north central area of Building 1; air monitoring indicated a maximum PID reading of 2,000 parts per million (ppm), there was no elevated CGI reading. Using a drum thief, sample D-14, a thick brown liquid, was collected from a drum in the north central area of Building 1; air monitoring indicated no

elevated PID or CGI readings. Using a drum thief, sample D-15, a clear liquid, was collected from a drum outside of Building 1 on the western side; air monitoring indicated no elevated PID or CGI readings. Using a stainless steel trowel, sample D-16, a white crystalline solid, was collected from a tank in the northwest corner of Building 1; air monitoring indicated no elevated PID or CGI readings. Sample D-17 was collected from a composite of drums 2, 3, 9, 10, 12, and 13. Sample Tar 1 was collected from the asphalt landfill adjacent to the Kankakee River. Sample A-1, an asbestos-like material, was collected in the basement of Building 1, on the north central side. Sample A-2, an asbestos-like material, was collected on the main floor of Building 1, on the north central side. Sample A-3, an asbestos-like material, was collected in the northwest corner of Building 2. Sample A-4, an asbestos-like material, was collected in the eastern area of Building 2. All drum samples and asbestos samples were collected in 4-ounce glass jars, and the tar samples were collected in two 16-ounce glass bottles and two 4-ounce glass bottles, and were sent to American Environmental Network (AEN) Laboratories in Schaumburg, Illinois, for analyses under analytical TDD S05-9709-805.

On December 11, 1997, OSC Fred Bartman requested that START return to site and collect an additional sample of the asphalt and asbestos in the basement of building 1. START John Nordine and OSC Bartman mobilized to the Celotex site to allow OSC Bartman to view the site and to collect the samples. Samples Tar 2 and Tar 3 were collected in the basement of Building 1 and were a black asphalt-like substance. Samples A-5 and A-6 were collected from pipe wrap in the basement of Building 1. The samples were collected in 16-ounce glass bottles and shipped to National Environmental Testing, Inc. (NET), in Bartlett, Illinois, for analyses under analytical TDD S05-9712-804.



#### **4. Analytical Results**

The first sampling event was on September 26, 1997. The drum samples (D-1 through D-17) were analyzed for volatile organic compounds (VOCs), semivolatile organic compounds (SVOCs), polychlorinated biphenyls (PCBs), Resource Conservation and Recovery Act (RCRA) metals, F-listed solvents, pH, and flash point. Sample Tar 1 was analyzed for SVOCs, RCRA metals, PCBs, and asbestos. Samples A-1 through A-4 were analyzed for asbestos only. For the second sampling event, on December 11, 1997, samples Tar 2 and Tar 3 were analyzed for polynuclear aromatic hydrocarbons (PAHs), PCBs, and RCRA metals. Samples A-5 and A-6 were analyzed for asbestos using polarized light microscopy. A summary of selected results are presented in Tables 4-1 and 4-2.

The pH of samples D-1, D-4, D-5, D-6, D-7, D-12, and D-16 exceeded 12.5 standard units, and therefore exhibit the characteristic of corrosivity, which designate these wastes as hazardous. The flash points of D-2, D-13, and D-14 were less than 140°F; the contents of these drums are considered hazardous waste, having exhibited the characteristic of ignitability. PCBs were not detected above detection limits in any of the samples analyzed for PCBs (D-17, Tar 1, Tar 2, Tar 3). Samples A-1, A-3, A-4, and A-6 tested positive for asbestos using polarized light microscopy (Tables 4-1 and 4-2).

<p align="center"><b>Table 4-1</b></p> <p align="center"><b>SUMMARY OF ANALYTICAL RESULTS (SEPTEMBER 26, 1997)</b></p> <p align="center"><b>CELOTEX SITE</b></p> <p align="center"><b>WILMINGTON, WILL COUNTY, ILLINOIS</b></p>										
Parameter	Sample Designation									
	D-1	D-2	D-3	D-4	D-5	D-6	D-7	D-8	D-9	D-10
pH (standard units)	> 14.0	NA	NA	> 14.0	> 14.0	13.4	13.6	9.54	NA	NA
Flash Point (°F)	NA	134	> 200	NA	NA	NA	NA	NA	> 200	> 200
F-Listed Solvents	NA	NA	ND	NA	NA	NA	NA	NA	NA	NA
RCRA Metals (mg/L)	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
<b>Volatile Organic Compounds (µg/kg)</b>										
Ethyl benzene	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Xylenes	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Benzene	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
<b>Semivolatile Organic Compounds (mg/kg)</b>										
Napthalene	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
2-Methyl-napthalene	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
PCBs (mg/kg)	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
<b>Asbestos (%)</b>										
Chrysotile	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Amosite	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA



<p align="center"><b>Table 4-1</b></p> <p align="center"><b>SUMMARY OF ANALYTICAL RESULTS (SEPTEMBER 26, 1997)</b></p> <p align="center"><b>CELOTEX SITE</b></p> <p align="center"><b>WILMINGTON, WILL COUNTY, ILLINOIS</b></p>										
Parameter	Sample Designation									
	D-12	D-13	D-14	D-16	D-17	Tar 1	A-1	A-2	A-3	A-4
pH (standard units)	> 14.0	NA	NA	13.7	NA	NA	NA	NA	NA	NA
Flash Point (°F)	> 200	81	67	NA	NA	NA	NA	NA	NA	NA
F-Listed Solvents	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
RCRA Metals (mg/L)	NA	NA	NA	NA	NA	ND	NA	NA	NA	NA
<b>Volatile Organic Compounds (µg/kg)</b>										
Ethyl benzene	NA	35,000	NA	NA	NA	NA	NA	NA	NA	NA
Xylenes	NA	170,000	NA	NA	NA	NA	NA	NA	NA	NA
Benzene	NA	8,300	NA	NA	NA	NA	NA	NA	NA	NA
<b>Semivolatile Organic Compounds (mg/kg)</b>										
Napthalene	NA	96	NA	NA	NA	NA	NA	NA	NA	NA
2-Methyl-napthalene	NA	27	NA	NA	NA	NA	NA	NA	NA	NA
PCBs (mg/kg)	NA	NA	NA	NA	ND	ND	NA	NA	NA	NA
<b>Asbestos (%)</b>										
Chrysotile	NA	NA	NA	NA	NA	ND	35-40	ND	5-10	15-20
Amosite	NA	NA	NA	NA	NA	NA	ND	ND	ND	10-15

Key:

NA	=	Not analyzed.
ND	=	Not detected.
°F	=	Degrees fahrenheit.
µg/kg	=	Micrograms per kilogram.
mg/kg	=	Milligrams per kilogram.
>	=	Greater than.

Source: American Environmental Network, Schaumburg, Illinois (Analytical TDD S05-9709-805).

<p align="center"><b>Table 4-2</b></p> <p align="center"><b>SUMMARY OF ANALYTICAL RESULTS (DECEMBER 11, 1997)</b></p> <p align="center"><b>CELOTEX SITE</b></p> <p align="center"><b>WILMINGTON, WILL COUNTY, ILLINOIS</b></p>				
Parameter	Sample Designation			
	Tar 2	Tar 3	A-5	A-6
<b>RCRA Metals (mg/kg)</b>				
Arsenic	3.0	2.8	NA	NA
Barium	32	24	NA	NA
Cadmium	2.0	0.78	NA	NA
Chromium	50	20	NA	NA
Lead	100	23	NA	NA
Mercury	<0.042	<0.048	NA	NA
Selenium	<0.26	<0.30	NA	NA
Silver	<2.1	<2.4	NA	NA
<b>Polyaromatic Hydrocarbons (mg/kg)</b>	ND	ND	NA	NA
<b>Polychlorinated Biphenyls (µg/kg)</b>				
PCB-1016	<5,000	<20,000	NA	NA
PCB-1221	<5,000	<20,000	NA	NA
PCB-1232	<5,000	<20,000	NA	NA
PCB-1242	<10,100	<20,000	NA	NA
PCB-1248	<5,000	<20,000	NA	NA
PCB-1254	<5,000	<20,000	NA	NA
PCB-1260	<5,000	<20,000	NA	NA
<b>Asbestos (%)</b>				
Actinolite/ tremolite	NA	NA	ND	ND
Amosite	NA	NA	ND	25
Anthophyllite	NA	NA	ND	ND
Chrysotile	NA	NA	ND	ND
Crocidolite	NA	NA	ND	20
Other components	NA	NA	100	55

Key:

NA	=	Not analyzed.
ND	=	Not detected.
µg/kg	=	Micrograms per kilogram.
mg/kg	=	Milligrams per kilogram.
<	=	Less than.

Source: National Environmental Testing, Bartlett, Illinois (Analytical TDD S05-9712-804).

## 5. Threats to Human Health and the Environment

Paragraph (b)(2) of Part 300.415 of the NCP lists factors to be considered when determining the appropriateness of a potential removal action at a site. The following discussion presents a summary of those factors for the Celotex site.

- **Actual or potential exposure to hazardous substances or pollutants or contaminants by nearby populations, animals, or food chains.** Analytical results from the drum samples collected on August 26, 1997, indicate the presence of hazardous substances at the Celotex site. Both ignitable and corrosive liquids were found in drum samples. Highly caustic liquids exist in samples D-1, D-4, D-5, D-6, D-7, D-12, and D-17. If ingested, caustic liquids can cause internal lesions and edema. Death can result due to the potential complications, such as asphyxia, shock, hemorrhage, or infection. Dermal exposure to less concentrated caustic solutions can cause irritation and dermatitis. Asbestos was also found in open bags and represents a carcinogenic threat to exposed populations. Because the Celotex facility is unsecured and located within the city of Wilmington, nearby residents can be exposed to hazardous materials present on site. The asphalt can leach an oily residue and cause much of the same damage as an oil release, such as damage to fish tissue, can kill benthic organisms, and can kill waterfowl.
- **Hazardous substances or pollutants or contaminants in drums, barrels, tanks, or other bulk storage containers, that may pose a threat of release.** START observed approximately twenty-five 55-gallon drums during the site reconnaissance. The drums contain liquids that exhibit both corrosive and ignitable characteristics. Some drums appeared to have leaked contents. In addition the asphalt can be categorized as a petroleum product under the Oil Pollution Act (OPA) and it has been documented that it can be found in and near the Kankakee River and Forked Creek, as was shown by the oil sheen on the water and the asphalt material submerged in the water and along the shoreline. The release of oil or petroleum products into national waterways falls under OPA.
- **Weather conditions that may cause pollutants or contaminants to migrate or be released.** All on-site contaminants are found in buildings with roofs

that are in a deteriorated state, which could allow migration of contaminants due to the weather. Exposure to the weather can result in additional degradation of the 55-gallon drums, which could cause further migration of contaminants if hazardous substances leaked. The asphalt material present in the landfill adjacent to the Kankakee River is leaching material into the river, as evidenced by an oil sheen present on the water surface.

- **Threat of fire or explosion.** Paragraph (a)(1) of Part 261.21 of 40 CFR states that a substance that exhibits a flash point of less than 140°F is ignitable. Samples D-2, D-13, and D-14 exhibit flash points of 134°F, 81°F, and 67°F, respectively, and are therefore, ignitable substances.

## **6. Summary**

Based upon the observations made during the U.S. EPA site assessment and analytical results from samples collected at the Celotex site, a Comprehensive Environmental Response, Compensation, and Liability Act (CERCLA) and OPA removal action is warranted. The presence of the threats addressed in Section 5 will require the removal of approximately 25 hazardous and nonhazardous drums, asbestos-containing material, and removal of 30,000 cubic yards of asphalt material from the on-site landfill.

At this time, the following specific actions are proposed to eliminate the threats listed in Section 5:

- 1) Drums will be segregated and sampled; following analysis, drums will be categorized for disposal;
- 2) Removal and disposal of all drums containing hazardous and nonhazardous materials;
- 3) Removal and disposal of all asbestos-containing material;
- 4) Removal and disposal of all asphalt-containing material from the on-site landfill.

The removal action is estimated to be completed in 70 days and will include the removal of all hazardous drums, nonhazardous drums, asbestos-containing material, and asphalt.

## **7. Cost Estimate**

A site estimate for the removal of solid wastes at the Celotex site has been based on several assumptions. For the cost estimate, it was estimated that 10 drums of hazardous materials, 15 drums of nonhazardous materials, 40 yards of asbestos-containing materials, and 30,000 cubic yards of asphalt material would need to be removed and disposed.

Prior to final disposal, all waste will be representatively sampled and analyzed for waste disposal parameters. The cleanup cost estimate, calculated using the Removal Cost Management System (RCMS) software version 4.2, includes cleanup contractor, U.S. EPA, and START costs, and totals approximately \$3,625,299. These costs are based on the above-mentioned assumptions and those that follow:

- The site work will be completed in seventy 10-hour days. Four days will be necessary for mobilization and demobilization. Site preparation and staging of the drums will take approximately four days. Sampling and analysis of the drums will take approximately three days. The coordination, preparation, and loading of the drums for off-site transportation and disposal will take approximately three days. Excavation and disposal of the asphalt waste will take 65 days.
- All cleanup contractor rates for personnel and equipment are those of the Emergency Response Cleanup Services (ERCS) contractor.
- ERCS personnel will consist of one response manager, one foreman, seven equipment operators/laborers, and one field clerk. The START contractor will provide one civil engineer. U.S. EPA will provide one OSC.





**SITE:** Celotex

**DATE:** September 26, 1997

**TIME:** 1000

**LOCATION:** Wilmington, IL

**DIRECTION:** East

**PHOTOGRAPHER:** Brendan McLennan

**SUBJECT:** View of Building 5 with visible graffiti.



**SITE:** Celotex

**DATE:** September 26, 1997

**TIME:** 1002

**LOCATION:** Wilmington, IL

**DIRECTION:** South

**PHOTOGRAPHER:** Brendan McLennan

**SUBJECT:** View of Building 4.





**SITE:** Celotex

**LOCATION:** Wilmington, IL

**SUBJECT:** View of Building 2.

**DATE:** August 26, 1997

**DIRECTION:** South

**TIME:** 1003

**PHOTOGRAPHER:** Brendan McLennan



**SITE:** Celotex

**LOCATION:** Wilmington, IL

**SUBJECT:** Asbestos-containing material in deteriorated bags.

**DATE:** August 26, 1997

**DIRECTION:** North

**TIME:** 1007

**PHOTOGRAPHER:** Brendan McLennan





**SITE:** Celotex

**DATE:** August 26, 1997

**TIME:** 1100

**LOCATION:** Wilmington, IL

**DIRECTION:** Northeast

**PHOTOGRAPHER:** Brendan McLennan

**SUBJECT:** Location of sample A-2.



**SITE:** Celotex

**DATE:** August 26, 1997

**TIME:** 1105

**LOCATION:** Wilmington, IL

**DIRECTION:** Southeast

**PHOTOGRAPHER:** Brendan McLennan

**SUBJECT:** Drum overpacks.





**SITE:** Celotex

**DATE:** August 26, 1997

**TIME:** 1107

**LOCATION:** Wilmington, IL

**DIRECTION:** West

**PHOTOGRAPHER:** Brendan McLennan

**SUBJECT:** Location of sample D-16.



**SITE:** Celotex

**DATE:** August 26, 1997

**TIME:** 1110

**LOCATION:** Wilmington, IL

**DIRECTION:** Northeast

**PHOTOGRAPHER:** Brendan McLennan

**SUBJECT:** View of Building 3.





**SITE:** Celotex

**DATE:** September 26, 1997

**TIME:** 1115

**LOCATION:** Wilmington, IL

**DIRECTION:** Southwest

**PHOTOGRAPHER:** Brendan McLennan

**SUBJECT:** Clarifiers west of Building 1.



**SITE:** Celotex

**DATE:** September 26, 1997

**TIME:** 1120

**LOCATION:** Wilmington, IL

**DIRECTION:** South

**PHOTOGRAPHER:** Brendan McLennan

**SUBJECT:** View of Building 1.





**SITE:** Celotex

**DATE:** August 26, 1997

**TIME:** 1130

**LOCATION:** Wilmington, IL

**DIRECTION:** South

**PHOTOGRAPHER:** Brendan McLennan

**SUBJECT:** Location of sample D-13 with PID reading of 2,000 ppm.



**SITE:** Celotex

**DATE:** August 26, 1997

**TIME:** 1131

**LOCATION:** Wilmington, IL

**DIRECTION:** Southwest

**PHOTOGRAPHER:** Brendan McLennan

**SUBJECT:** Location of sample D-12.





**SITE:** Celotex

**DATE:** August 26, 1997

**TIME:** 1134

**LOCATION:** Wilmington, IL

**DIRECTION:** North

**PHOTOGRAPHER:** Brendan McLennan

**SUBJECT:** Location of sample D-9, on the left, and D-10, on the right.



**SITE:** Celotex

**DATE:** August 26, 1997

**TIME:** 1137

**LOCATION:** Wilmington, IL

**DIRECTION:** North

**PHOTOGRAPHER:** Brendan McLennan

**SUBJECT:** Location of samples D-1 to D-8.





**SITE:** Celotex

**DATE:** August 26, 1997

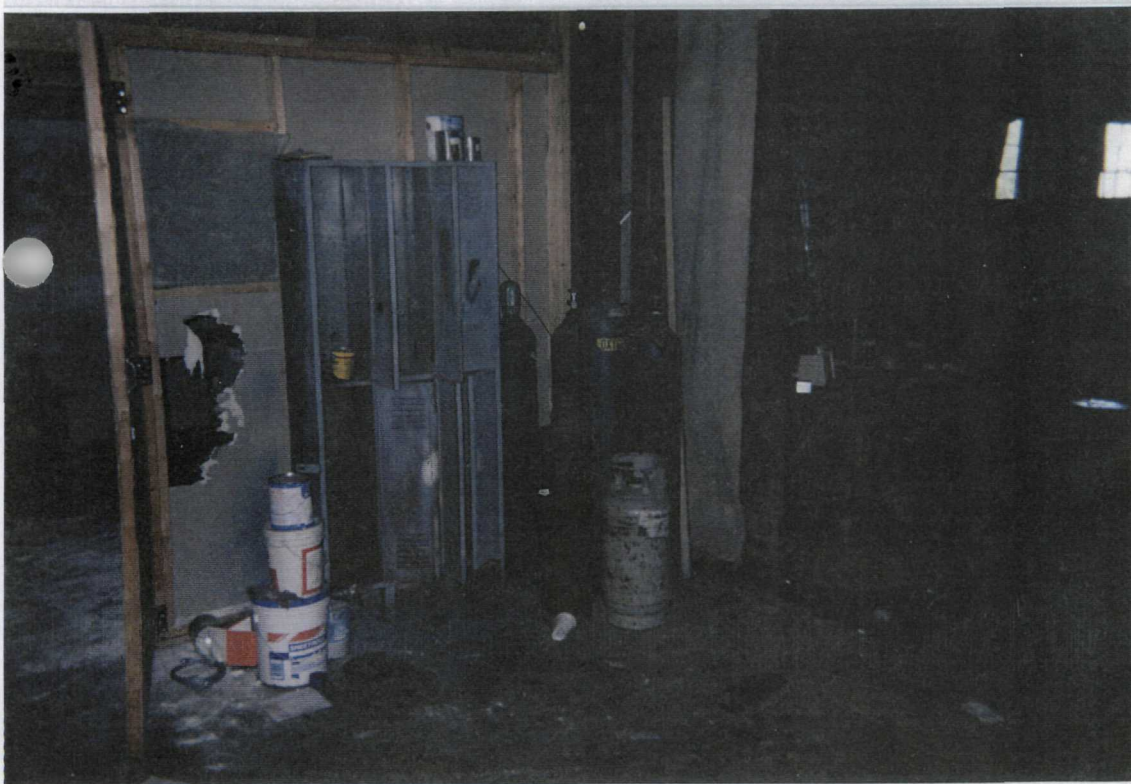
**TIME:** 1145

**LOCATION:** Wilmington, IL

**DIRECTION:** North

**PHOTOGRAPHER:** Brendan McLennan

**SUBJECT:** View inside Building 3.



**SITE:** Celotex

**DATE:** August 26, 1997

**TIME:** 1147

**LOCATION:** Wilmington, IL

**DIRECTION:** North

**PHOTOGRAPHER:** Brendan McLennan

**SUBJECT:** View of artist's workshop in Building 3.





**SITE:** Celotex

**DATE:** September 26, 1997

**TIME:** 1200

**LOCATION:** Wilmington, IL **DIRECTION:** East

**PHOTOGRAPHER:** Brendan McLennan

**SUBJECT:** Tar mass near Forked Creek.



**SITE:** Celotex

**DATE:** August 26, 1997

**TIME:** 1205

**LOCATION:** Wilmington, IL **DIRECTION:** Down

**PHOTOGRAPHER:** Brendan McLennan

**SUBJECT:** Location of sample Tar 1.

## **Appendix B**

### **Analytical Data Package**





# ecology and environment, inc.

International Specialists in the Environment

33 North Dearborn Street  
Chicago, Illinois 60602  
Tel. 312/578-9243, Fax: 312/578-9345

## M E M O R A N D U M

DATE: October 30, 1997

TO: Brendan McLennan, START Project Manager, E & E,  
Chicago, Illinois

FROM: David Hendren, START Analytical Services Manager,  
E & E, Chicago, Illinois

THROUGH: Mary Jane Ripp, START Assistant Program Manager,  
E & E, Chicago, Illinois

SUBJECT: Organic Data Quality Review for Volatile Organic  
Compounds (VOCs), Celotex, Wilmington, Will County,  
Illinois

REFERENCE: Project TDD S05-9709-007 Analytical TDD S05-9709-805  
Project PAN 7P0701SIXX Analytical PAN 7PAE01TAXX

The data quality assurance (QA) review of one drum sample collected from the Celotex site is complete. The sample was collected on September 26, 1997, by the Superfund Technical Assessment and Response Team (START) contractor, Ecology and Environment, Inc. (E & E). The sample was submitted to American Environmental Network, Schaumburg, Illinois. The laboratory analyses were performed according to the United States Environmental Protection Agency (U.S. EPA) Solid Waste 846 Method 8260.

### Sample Identification

START  
Identification No.

D-13

Laboratory  
Identification No.

L72972331-012

### Data Qualifications:

#### I. Sample Holding Time: Acceptable

The sample was collected on September 26, 1997, and analyzed on October 10, 1997. This is within the 14-day holding time limit.

II. Gas Chromatography/Mass Spectrometry (GC/MS) Tuning:  
Acceptable

GC/MS tuning to meet ion abundance criteria using bromofluorobenzene (BFB) were acceptable and the sample was analyzed within 12 hours of BFB tuning.

III. Calibrations:

• Initial Calibration: Acceptable

A five-point initial calibration was performed prior to analysis. All average response factors were greater than 0.05. The percent relative standard deviations (%RSDs) between response factors were less than 30% for all detected target compounds.

• Continuing Calibration: Not Applicable

The sample was analyzed following the initial calibration; therefore, continuing calibration was not required.

IV. Blank: Acceptable

A method blank was analyzed with the sample. No target compounds or contaminants were detected in the blank.

V. Internal Standards: Acceptable

The areas of the internal standards in the sample were within -50% to +100% of the associated calibration check standard. The retention times of the internal standards were within the 30-second control limit.

VI. Compound Identification: Acceptable

The mass spectra and retention times of the detected compounds matched those of the standards.

VII. Additional QC Checks: Acceptable

The recoveries of the surrogates used in the sample and blank were within laboratory-established guidelines.

Celotex  
Project TDD S05-9709-007  
Analytical TDD S05-9709-805  
VOCs  
Page 3

VIII. Overall Assessment of Data for Use: Acceptable

The overall usefulness of the data is based on criteria for QA Level II as outlined in the Office of Solid Waste and Emergency Response (OSWER) Directive 9360.4-01 (April 1990), Data Validation Procedures, Section 5.0, VOAs By GC/MS analysis. Based upon the information provided, the data are acceptable for use.

Client : Ecology & Environment  
Project ID : S05-9709-007

**EPA Target Compound List (TCL)  
GCMS Volatiles Analysis**

Lab Sample Number : L72972331-012  
Client ID : D-13

Method: 8260  
Matrix : MISC LIQ

<b>Compound</b>	<b>Result</b>	<b>PQL</b>	<b>Units</b>	<b>Dilution Factor</b>	<b>Sample Date</b>	<b>Analysis Date</b>
Chloromethane	< 5,000	5,000	ug/Kg	1,000	9/26/97	10/10/97
Vinyl Chloride	< 5,000	5,000	ug/Kg	1,000	9/26/97	10/10/97
Bromomethane	< 5,000	5,000	ug/Kg	1,000	9/26/97	10/10/97
Chloroethane	< 5,000	5,000	ug/Kg	1,000	9/26/97	10/10/97
1,1-Dichloroethene	< 5,000	5,000	ug/Kg	1,000	9/26/97	10/10/97
Methylene Chloride	< 5,000	5,000	ug/Kg	1,000	9/26/97	10/10/97
trans-1,2-Dichloroethene	< 5,000	5,000	ug/Kg	1,000	9/26/97	10/10/97
1,1-Dichloroethane	< 5,000	5,000	ug/Kg	1,000	9/26/97	10/10/97
cis-1,2-Dichloroethene	< 5,000	5,000	ug/Kg	1,000	9/26/97	10/10/97
Chloroform	< 5,000	5,000	ug/Kg	1,000	9/26/97	10/10/97
1,1,1-Trichloroethane	< 5,000	5,000	ug/Kg	1,000	9/26/97	10/10/97
Carbon Tetrachloride	< 5,000	5,000	ug/Kg	1,000	9/26/97	10/10/97
Benzene	8,300	5,000	ug/Kg	1,000	9/26/97	10/10/97
1,2-Dichloroethane	< 5,000	5,000	ug/Kg	1,000	9/26/97	10/10/97
Trichloroethene	< 5,000	5,000	ug/Kg	1,000	9/26/97	10/10/97
1,2-Dichloropropane	< 5,000	5,000	ug/Kg	1,000	9/26/97	10/10/97
Bromodichloromethane	< 5,000	5,000	ug/Kg	1,000	9/26/97	10/10/97
cis-1,3-Dichloropropene	< 5,000	5,000	ug/Kg	1,000	9/26/97	10/10/97
Toluene	15,000	5,000	ug/Kg	1,000	9/26/97	10/10/97
trans-1,3-Dichloropropene	< 5,000	5,000	ug/Kg	1,000	9/26/97	10/10/97
1,1,2-Trichloroethane	< 5,000	5,000	ug/Kg	1,000	9/26/97	10/10/97
Tetrachloroethene	< 5,000	5,000	ug/Kg	1,000	9/26/97	10/10/97
Dibromochloromethane	< 5,000	5,000	ug/Kg	1,000	9/26/97	10/10/97
Chlorobenzene	< 5,000	5,000	ug/Kg	1,000	9/26/97	10/10/97
Ethylbenzene	35,000	5,000	ug/Kg	1,000	9/26/97	10/10/97
Xylenes, Total	170,000	10,000	ug/Kg	1,000	9/26/97	10/10/97
Styrene	< 5,000	5,000	ug/Kg	1,000	9/26/97	10/10/97
Bromoform	< 5,000	5,000	ug/Kg	1,000	9/26/97	10/10/97
1,1,2,2-Tetrachloroethane	< 5,000	5,000	ug/Kg	1,000	9/26/97	10/10/97
Acetone	< 10,000	10,000	ug/Kg	1,000	9/26/97	10/10/97
Carbon Disulfide	< 5,000	5,000	ug/Kg	1,000	9/26/97	10/10/97
2-Butanone	< 10,000	10,000	ug/Kg	1,000	9/26/97	10/10/97
2-Hexanone	< 10,000	10,000	ug/Kg	1,000	9/26/97	10/10/97
4-Methyl-2-Pentanone	< 10,000	10,000	ug/Kg	1,000	9/26/97	10/10/97



# ecology and environment, inc.

International Specialists in the Environment

33 North Dearborn Street  
Chicago, Illinois 60602  
Tel. 312/578-9243, Fax: 312/578-9345

## M E M O R A N D U M

DATE: October 30, 1997

TO: Brendan McLennan, START Project Manager, E & E,  
Chicago, Illinois

FROM: David Hendren, START Analytical Services Manager,  
E & E, Chicago, Illinois

THROUGH: Mary Jane Ripp, START Assistant Program Manager,  
E & E, Chicago, Illinois

SUBJECT: Organic Data Quality Review for Semivolatile Organic  
Compounds (SVOCs), Celotex, Wilmington, Will County,  
Illinois

REFERENCE: Project TDD S05-9709-007 Analytical TDD S05-9709-805  
Project PAN 7P0701SIXX Analytical PAN 7PAE01TAXX

The data quality assurance (QA) review of one drum and one tar sample collected from the Celotex site is complete. The samples were collected on September 26, 1997, by the Superfund Technical Assessment and Response Team (START) contractor, Ecology and Environment, Inc. (E & E). The samples were submitted to American Environmental Network, Schaumburg, Illinois. The laboratory analyses were performed according to the United States Environmental Protection Agency (U.S. EPA) Solid Waste 846 Method 8270.

### Sample Identification

<u>START</u> <u>Identification No.</u>	<u>Laboratory</u> <u>Identification No.</u>
D-13	L72972331-012
Tar 1	L72972331-016

### Data Qualifications:

#### I. Sample Holding Time: Acceptable

The samples were collected on September 26, 1997, extracted on October 12, 1997, and analyzed on October 13, 1997. This is within the 14-day holding time limit, from collection to extraction, and 40-day limit from extraction to analysis.

II. Gas Chromatography/Mass Spectrometry (GC/MS) Tuning:  
Acceptable

GC/MS tuning to meet ion abundance criteria using decafluorotriphenylphosphine (DFTPP) were acceptable and samples were analyzed within 12 hours of DFTPP tuning.

III. Calibrations:

• Initial Calibration: Acceptable

A five-point initial calibration was performed prior to analysis. All average response factors were greater than 0.05. The percent relative standard deviations (%RSDs) between response factors were less than 30% for all detected target compounds.

• Continuing Calibration: Acceptable

The percent differences of the response factors were less than 25%, as required for detected target compounds.

IV. Blank: Acceptable

A method blank was analyzed with the samples. No target compounds or contaminants were detected in the blank.

V. Internal Standards: Acceptable

The areas of the internal standards in the samples were within -50% to +100% of the associated calibration check standard. The retention times of the internal standards were within the 30-second control limit.

VI. Compound Identification: Acceptable

The mass spectra and retention times of the detected compounds matched those of the standards.

VII. Additional QC Checks: Acceptable

The recoveries of the surrogates used in the samples were above laboratory-established guidelines in all samples due to matrix interferences. Two target compounds were detected in only one sample, in which the associated internal standard was acceptable; therefore qualification was not required.



Celotex  
Project TDD S05-9709-007  
Analytical TDD S05-9709-805  
SVOCs  
Page 3

VIII. Overall Assessment of Data for Use: Acceptable

The overall usefulness of the data is based on criteria for QA Level II as outlined in the Office of Solid Waste and Emergency Response (OSWER) Directive 9360.4-01 (April 1990), Data Validation Procedures, Section 5.0, BNAs By GC/MS analysis. Based upon the information provided, the data are acceptable for use.

Client: Ecology & Environment  
AEN Job#: L72972331  
Project ID: S05-9709-007  
Matrix: Misc Liquid  
Method: 8270

EPA Target Compound List (TCL)  
Base Neutral Acids  
mg/Kg

Analyte	Dilution Factor	1.35	1				PQL
	Method Blank	SWD1012	SWD1012				
	Client ID	D-13	METHOD BLANK				
	Lab ID	012	SWD1012				
Phenol		U	U				10
Bis (2-Chloroethyl) ether		U	U				10
2-Chlorophenol		U	U				10
1,3-Dichlorobenzene		U	U				10
1,4-Dichlorobenzene		U	U				10
Benzyl Alcohol		U	U				10
1,2-Dichlorobenzene		U	U				10
2-Methylphenol		U	U				10
bis (2-Chloroisopropyl) ether		U	U				10
4-Methylphenol		U	U				10
N-Nitroso-di-n-propylamine		U	U				10
Hexachloroethane		U	U				10
Nitrobenzene		U	U				10
Isophorone		U	U				10
2-Nitrophenol		U	U				10
2,4-Dimethylphenol		U	U				10
Benzoic Acid		U	U				50
bis (2-Chloroethoxy) methane		U	U				10
2,4-Dichlorophenol		U	U				10
1,2,4-Trichlorobenzene		U	U				10
Naphthalene		96	U				10
4-Chloroaniline		U	U				10
Hexachlorobutadiene		U	U				10
4-Chloro-3-methylphenol		U	U				10
2-Methylnaphthalene		27	U				10
Hexachlorocyclopentadiene		U	U				10
2,4,6-Trichlorophenol		U	U				10
2,4,5-Trichlorophenol		U	U				50
2-Chloronaphthalene		U	U				10
2-Nitroaniline		U	U				50
Dimethylphthalate		U	U				10
Acenaphthylene		U	U				10
2,6-Dinitrotoluene		U	U				10

PQL = Practical Quantitation Limit

To obtain sample-specific quantitation limit, multiply the PQL by the Dilution Factor.

Client: Ecology & Environment  
AEN Job#: L72972331  
Project ID: S05-9709-007  
Matrix: Misc Liquid  
Method: 8270

EPA Target Compound List (TCL)  
Base Neutral Acids  
mg/Kg

Analyte	Dilution Factor	1.35	1				PQL
	Method Blank	SWD1012	SWD1012				
	Client ID	D-13	METHOD BLANK				
	Lab ID	012	SWD1012				
3-Nitroaniline	U	U					50
Acenaphthene	U	U					10
2,4-Dinitrophenol	U	U					50
4-Nitrophenol	U	U					50
Dibenzofuran	U	U					10
2,4-Dinitrotoluene	U	U					10
Diethylphthalate	U	U					10
4-Chlorophenyl phenyl ether	U	U					10
Fluorene	U	U					10
4-Nitroaniline	U	U					50
4,6-Dinitro-2-methylphenol	U	U					50
N-Nitrosodiphenylamine (1)	U	U					10
4-Bromophenyl phenyl ether	U	U					10
Hexachlorobenzene	U	U					10
Pentachlorophenol	U	U					50
Phenanthrene	U	U					10
Anthracene	U	U					10
Di-n-butylphthalate	U	U					10
Fluoranthene	U	U					10
Pyrene	U	U					10
Butyl benzyl phthalate	U	U					10
3,3'-Dichlorobenzidine	U	U					50
Benzo (a) anthracene	U	U					10
Chrysene	U	U					10
bis (2-ethylhexyl) phthalate	U	U					10
Di-n-octylphthalate	U	U					10
Benzo (b) fluoranthene	U	U					10
Benzo (k) fluoranthene	U	U					10
Benzo (a) pyrene	U	U					10
Indeno (1,2,3-cd) pyrene	U	U					10
Dibenz (a,h) anthracene	U	U					10
Benzo (g,h,i) perylene	U	U					10
Date Sampled	9/26/97	---					
Date Extracted	10/12/97	10/12/97					
Date Analyzed	10/13/97	10/13/97					

(1) - Cannot be separated from Diphenylamine

PQL = Practical Quantitation Limit

To obtain sample-specific quantitation limit, multiply the PQL by the Dilution Factor.

Client: Ecology & Environment  
AEN Job#: L72972331  
Project ID: S05-9709-007  
Matrix: Misc Solid  
Method: 8270

EPA Target Compound List (TCL)  
Base Neutral Acids  
mg/Kg

Analyte	Dilution Factor	5	1				PQL
	Method Blank	SWD1012	SWD1012				
	Client ID	TAR 1	METHOD BLANK				
	Lab ID	016	SWD1012				
Phenol	UD	U					10
Bis (2-Chloroethyl) ether	UD	U					10
2-Chlorophenol	UD	U					10
1,3-Dichlorobenzene	UD	U					10
1,4-Dichlorobenzene	UD	U					10
Benzyl Alcohol	UD	U					10
1,2-Dichlorobenzene	UD	U					10
2-Methylphenol	UD	U					10
bis (2-Chloroisopropyl) ether	UD	U					10
4-Methylphenol	UD	U					10
N-Nitroso-di-n-propylamine	UD	U					10
Hexachloroethane	UD	U					10
Nitrobenzene	UD	U					10
Isophorone	UD	U					10
2-Nitrophenol	UD	U					10
2,4-Dimethylphenol	UD	U					10
Benzoic Acid	UD	U					50
bis (2-Chloroethoxy) methane	UD	U					10
2,4-Dichlorophenol	UD	U					10
1,2,4-Trichlorobenzene	UD	U					10
Naphthalene	UD	U					10
4-Chloroaniline	UD	U					10
Hexachlorobutadiene	UD	U					10
4-Chloro-3-methylphenol	UD	U					10
2-Methylnaphthalene	UD	U					10
Hexachlorocyclopentadiene	UD	U					10
2,4,6-Trichlorophenol	UD	U					10
2,4,5-Trichlorophenol	UD	U					50
2-Chloronaphthalene	UD	U					10
2-Nitroaniline	UD	U					50
Dimethylphthalate	UD	U					10
Acenaphthylene	UD	U					10
2,6-Dinitrotoluene	UD	U					10

PQL = Practical Quantitation Limit

To obtain sample-specific quantitation limit, multiply the PQL by the Dilution Factor.

Client: Ecology & Environment  
AEN Job#: L72972331  
Project ID: S05-9709-007  
Matrix: Misc Solid  
Method: 8270

EPA Target Compound List (TCL)  
Base Neutral Acids  
mg/Kg

Analyte	Dilution Factor	5	1				PQL
	Method Blank	SWD1012	SWD1012				
	Client ID	TAR 1	METHOD BLANK				
	Lab ID	016	SWD1012				
3-Nitroaniline	UD	U					50
Acenaphthene	UD	U					10
2,4-Dinitrophenol	UD	U					50
4-Nitrophenol	UD	U					50
Dibenzofuran	UD	U					10
2,4-Dinitrotoluene	UD	U					10
Diethylphthalate	UD	U					10
4-Chlorophenyl phenyl ether	UD	U					10
Fluorene	UD	U					10
4-Nitroaniline	UD	U					50
4,6-Dinitro-2-methylphenol	UD	U					50
N-Nitrosodiphenylamine (1)	UD	U					10
4-Bromophenyl phenyl ether	UD	U					10
Hexachlorobenzene	UD	U					10
Pentachlorophenol	UD	U					50
Phenanthrene	UD	U					10
Anthracene	UD	U					10
Di-n-butylphthalate	UD	U					10
Fluoranthene	UD	U					10
Pyrene	UD	U					10
Butyl benzyl phthalate	UD	U					10
3,3'-Dichlorobenzidine	UD	U					50
Benzo (a) anthracene	UD	U					10
Chrysene	UD	U					10
bis (2-ethylhexyl) phthalate	UD	U					10
Di-n-octylphthalate	UD	U					10
Benzo (b) fluoranthene	UD	U					10
Benzo (k) fluoranthene	UD	U					10
Benzo (a) pyrene	UD	U					10
Indeno (1,2,3-cd) pyrene	UD	U					10
Dibenz (a,h) anthracene	UD	U					10
Benzo (g,h,i) perylene	UD	U					10
Date Sampled	9/26/97	---					
Date Extracted	10/12/97	10/12/97					
Date Analyzed	10/13/97	10/13/97					

(1) - Cannot be separated from Diphenylamine

PQL = Practical Quantitation Limit

To obtain sample-specific quantitation limit, multiply the PQL by the Dilution Factor.



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33 North Dearborn Street  
Chicago, Illinois 60602  
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## M E M O R A N D U M

DATE: October 30, 1997

TO: Brendan McLennan, START Project Manager, E & E,  
Chicago, Illinois

FROM: David Hendren, START Analytical Services Manager,  
E & E, Chicago, Illinois

THROUGH: Mary Jane Ripp, START Assistant Program Manager,  
E & E, Chicago, Illinois

SUBJECT: Organic Data Quality Review for F-Listed Solvents,  
Celotex, Wilmington, Will County, Illinois

REFERENCE: Project TDD S05-9709-007 Analytical TDD S05-9709-805  
Project PAN 7P0701SIXX Analytical PAN 7PAE01TAXX

The data quality assurance (QA) review of one drum sample collected from the Celotex site is complete. The sample was collected on September 26, 1997, by the Superfund Technical Assessment and Response Team (START) contractor, Ecology and Environment, Inc. (E & E). The sample was submitted to American Environmental Network, Schaumburg, Illinois. The laboratory analyses were performed according to the United States Environmental Protection Agency (U.S. EPA) Solid Waste 846 Methods 8260 and 8270.

### Sample Identification

START  
Identification No.

D-3

Laboratory  
Identification No.

L72972331-003

### Data Qualifications:

#### I. Sample Holding Time: Acceptable

The sample was collected on September 26, 1997, and analyzed on October 10, 1997. This is within the 14-day holding time limit from collection to analysis for volatiles and 14-day limit from collection to extraction, and 40-day limit from extraction to analysis, for semivolatiles.

II. Gas Chromatography/Mass Spectrometry (GC/MS) Tuning:  
Acceptable

GC/MS tuning to meet ion abundance criteria using bromofluorobenzene (BFB) or decafluorotriphenylphosphine (DFTPP) were acceptable and the sample was analyzed within 12 hours of BFB or DFTPP tuning.

III. Calibrations:

• Initial Calibration: Qualified

A five-point initial calibration was performed prior to analysis. All average response factors were greater than 0.05 except cyclohexanone; therefore, the nondetect value for this compound has been flagged "R", as required. The percent relative standard deviations (%RSDs) between response factors were less than 30% for all detected target compounds.

• Continuing Calibration: Not Applicable

The sample was analyzed following the initial calibration.

IV. Blank: Acceptable

A method blank was analyzed with the sample. No target compounds or contaminants were detected in the blank.

V. Internal Standards: Acceptable

The areas of the internal standards in the sample were within -50% to +100% of the associated calibration check standard. The retention times of the internal standards were within the 30-second control limit.

VI. Compound Identification: Not Applicable

There were no detected target compounds in the sample.

VII. Additional QC Checks: Acceptable

The recoveries of the surrogates used in the sample and blank were within laboratory-established guidelines.

Celotex  
Project TDD S05-9709-007  
Analytical TDD S05-9709-805  
F-Listed Solvents  
Page 3

VIII. Overall Assessment of Data for Use: Acceptable

The overall usefulness of the data is based on criteria for QA Level II as outlined in the Office of Solid Waste and Emergency Response (OSWER) Directive 9360.4-01 (April 1990), Data Validation Procedures, Section 4.0, BNAs By GC/MS and 5.0, VOAs By GC/MS analysis. Based upon the information provided, the data are acceptable for use, with the above-stated qualifications.

Data Qualifiers and Definitions:

R - The sample results are rejected (analyte may or may not be present) due to gross deficiencies in quality control criteria. Any reported value is unusable. Resampling and/or reanalysis is necessary for verification.



Client : Ecology & Environment  
Project ID : S05-9709-007

**FList Solvent Scan  
GCMS Volatiles Analysis**

Lab Sample Number : L72972331-003  
Client ID : D-3

Method: 8260  
Matrix : MISC LIQ

<b>Compound</b>	<b>Result</b>	<b>PQL</b>	<b>Units</b>	<b>Dilution Factor</b>	<b>Sample Date</b>	<b>Analysis Date</b>
Trichlorofluoromethane	<5,000	5,000	ug/Kg	500	9/26/97	10/10/97
Methylene Chloride	<2,500	2,500	ug/Kg	500	9/26/97	10/10/97
1,1,1-Trichloroethane	<2,500	2,500	ug/Kg	500	9/26/97	10/10/97
Carbon Tetrachloride	<2,500	2,500	ug/Kg	500	9/26/97	10/10/97
Benzene	<2,500	2,500	ug/Kg	500	9/26/97	10/10/97
Trichloroethene	<2,500	2,500	ug/Kg	500	9/26/97	10/10/97
Toluene	<2,500	2,500	ug/Kg	500	9/26/97	10/10/97
1,1,2-Trichloroethane	<2,500	2,500	ug/Kg	500	9/26/97	10/10/97
Tetrachloroethene	<2,500	2,500	ug/Kg	500	9/26/97	10/10/97
Chlorobenzene	<2,500	2,500	ug/Kg	500	9/26/97	10/10/97
Ethylbenzene	<2,500	2,500	ug/Kg	500	9/26/97	10/10/97
Xylenes, Total	<5,000	5,000	ug/Kg	500	9/26/97	10/10/97
o-Dichlorobenzene	<2,500	2,500	ug/Kg	500	9/26/97	10/10/97
Acetone	<5,000	5,000	ug/Kg	500	9/26/97	10/10/97
Carbon Disulfide	<2,500	2,500	ug/Kg	500	9/26/97	10/10/97
Methyl Ethyl Ketone	<5,000	5,000	ug/Kg	500	9/26/97	10/10/97
1,1,2-Trichloro-1,2,2-trifluoroethane	<5,000	5,000	ug/Kg	500	9/26/97	10/10/97
Ethyl Acetate	<25,000	25,000	ug/Kg	500	9/26/97	10/10/97
Methyl Isobutyl Ketone	<5,000	5,000	ug/Kg	500	9/26/97	10/10/97
Isobutanol	<250,000	250,000	ug/Kg	500	9/26/97	10/10/97
Ethyl Ether	<25,000	25,000	ug/Kg	500	9/26/97	10/10/97
n-Butyl Alcohol	<100,000	100,000	ug/Kg	500	9/26/97	10/10/97
2-Nitropropane	<25,000	25,000	ug/Kg	500	9/26/97	10/10/97
Cyclohexanone	<100,000 R	100,000	ug/Kg	500	9/26/97	10/10/97

# AEN - MA Laboratory Results

Client: IEA/American Env. Network(IL)  
 Project: L72972331  
 Report Date: 10/17/97

AEN ID: 0072-091  
 Received: 10/08/97

AEN #	Client ID	Parameter	Results	Units	PQL	Date Analyzed	Analyst	Method
01	D-3	Methanol	BQL	mg/L	10	10/17/97	SM	GCS00400.MA
01	D-3	2- Ethoxyethanol	BQL	mg/L	10	10/17/97	SM	GCS00400.MA
MB		Methanol	BQL	mg/L	1	10/17/97	SM	GCS00400.MA
MB		2- Ethoxyethanol	BQL	mg/L	1	10/17/97	SM	GCS00400.MA
MS		Methanol	96	%	---	10/17/97	SM	GCS00400.MA
MS		2- Ethoxyethanol	106	%	---	10/17/97	SM	GCS00400.MA
MSD		Methanol	89	%	---	10/17/97	SM	GCS00400.MA
MSD		2- Ethoxyethanol	105	%	---	10/17/97	SM	GCS00400.MA

## Comments:

PQL = Practical quantitation limit.  
 BQL = Below quantitation limit.

Client: Ecology & Environment

AEN Job#: L72972331

Project ID: S05-9709-007

Matrix: Misc. Liquid

Method: 8270

**F001 - F005 BNA ANALYSIS**  
mg/Kg

	Dilution Factor	1	1				Lower Limits of Detection (LLD) with no Dilution*
	Method Blank	SWD1012	SWD1012				
	Client ID	D-3	METHOD BLANK				
	Lab ID	003	SWD1012				
Analyte							
Cresols (Cresylic Acid)		U	U				10
Nitrobenzene		U	U				10
Pyridine		U	U				10
Date Sampled		9/26/97	---				
Date Extracted		10/12/97	10/12/97				
Date Analyzed		10/13/97	10/13/97				

\*MDL (Minimum Detection Limit) = LLD x DF



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## M E M O R A N D U M

DATE: October 30, 1997

TO: Brendan McLennan, START Project Manager, E & E,  
Chicago, Illinois

FROM: David Hendren, START Analytical Services Manager,  
E & E, Chicago, Illinois

THROUGH: Mary Jane Ripp, START Assistant Program Manager,  
E & E, Chicago, Illinois

SUBJECT: Data Quality Review for Polychlorinated Biphenyls  
(PCBs), Celotex, Wilmington, Will County, Illinois

REFERENCE: Project TDD S05-9709-007 Analytical TDD S05-9709-805  
Project PAN 7P0701SIXX Analytical PAN 7PAE01TAXX

The data quality assurance (QA) review of one drum composite and one tar sample collected from the Celotex site is complete. The samples were collected on September 26, 1997, by the Superfund Technical Assessment and Response Team (START) contractor, Ecology and Environment, Inc. (E & E). The samples were submitted to American Environmental Network, Schaumburg, Illinois. The laboratory analyses were performed according to the United States Environmental Protection Agency (U.S. EPA) Solid Waste 846 Method 8081.

### Sample Identification

<u>START</u> <u>Identification No.</u>	<u>Laboratory</u> <u>Identification No.</u>
D-17	L72972331-015
Tar 1	L72972331-016

### Data Qualifications:

#### I. Sample Holding Time: Acceptable

The samples were collected on September 26, 1997, and extracted and analyzed on October 10, 1997. This is within the 14-day holding time limit, from collection to extraction, and 40-day limit from extraction to analysis.

II. Instrument Performance: Acceptable

The chromatographic resolution was adequate in the standard and sample chromatograms. Surrogate retention times were consistent in the samples and standards.

III. Calibrations:

• Initial Calibration: Acceptable

A five-point initial calibration was performed prior to analysis. The percent relative standard deviations (%RSDs) between response factors were less than 20% for all PCBs.

• Continuing Calibration: Acceptable

The percent differences of the response factors were less than 15%.

IV. Blank: Acceptable

A method blank was analyzed with the sample. No target compounds or contaminants were detected in the blank.

V. Compound Identification: Not Applicable

There were no PCBs detected in the samples.

VI. Additional QC Checks: Acceptable

The recoveries of the surrogates used in the samples were within acceptable laboratory limits, except for the tar sample. Since PCBs were not detected in this sample qualification was not required.

VII. Overall Assessment of Data for Use: Acceptable

The overall usefulness of the data is based on criteria for QA Level II as outlined in the Office of Solid Waste and Emergency Response (OSWER) Directive 9360.4-01 (April 1990), Data Validation Procedures, Section 7.0, PCBs. Based upon the information provided, the data are acceptable for use.

Client: Ecology & Environmental  
AEN Job#: L72972331  
Project ID: S05-9709-007  
Matrix: Misc Liquid  
Method: 8081

RCRA/TCL  
PCB's  
mg/Kg

Analyte	Dilution Factor	1	1				Lower Limits of Detection (LLD) with no Dilution*
	Method Blank	PWD1008	PWD1008				
	Client ID	D-17	METHOD BLANK				
	Lab ID	015	PWD1008				
Aroclor - 1016		U	U				1.0
Aroclor - 1221		U	U				2.0
Aroclor - 1232		U	U				1.0
Aroclor - 1242		U	U				1.0
Aroclor - 1248		U	U				1.0
Aroclor - 1254		U	U				1.0
Aroclor - 1260		U	U				1.0
Date Sampled		9/26/97	---				
Date Extracted		10/8/97	10/8/97				
Date Analyzed		10/8/97	10/8/97				

\*MDL (Minimum Detection Limit) = LLD x DF

Client: Ecology & Environmental  
AEN Job#: L72972331  
Project ID: S05-9709-007  
Matrix: Misc Solid  
Method: 8081

RCRA/TCL  
PCB's  
mg/Kg

Analyte	Dilution Factor	10	1				Lower Limits of Detection (LLD) with no Dilution*
	Method Blank	PWD1008	PWD1008				
	Client ID	TAR 1	METHOD BLANK				
	Lab ID	016	PWD1008				
Aroclor - 1016		UD	U				1.0
Aroclor - 1221		UD	U				2.0
Aroclor - 1232		UD	U				1.0
Aroclor - 1242		UD	U				1.0
Aroclor - 1248		UD	U				1.0
Aroclor - 1254		UD	U				1.0
Aroclor - 1260		UD	U				1.0
Date Sampled		9/26/97	---				
Date Extracted		10/8/97	10/8/97				
Date Analyzed		10/8/97	10/8/97				

\*MDL (Minimum Detection Limit) = LLD x DF



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## M E M O R A N D U M

DATE: October 30, 1997

TO: Brendan McLennan, START Project Manager, E & E,  
Chicago, Illinois

FROM: David Hendren, START Analytical Services Manager,  
E & E, Chicago, Illinois

THROUGH: Mary Jane Ripp, START Assistant Program Manager,  
E & E, Chicago, Illinois

SUBJECT: Inorganic Data Quality Review for Resource  
Conservation and Recovery Act (RCRA) and Toxicity  
Characteristic Leaching Procedure (TCLP) Metals,  
Celotex, Wilmington, Will County, Illinois

REFERENCE: Project TDD S05-9709-007 Analytical TDD S05-9709-805  
Project PAN 7P0701SIXX Analytical PAN 7PAE01TAXX

The data quality assurance (QA) review of two drum and one tar samples collected from the Celotex site is complete. The samples were collected on September 26, 1997, by the Superfund Technical Assessment and Response Team (START) contractor, Ecology and Environment, Inc. (E & E). The samples were submitted to American Environmental Network, Schaumburg, Illinois. The laboratory analyses were performed according to the United States Environmental Protection Agency (U.S. EPA) Solid Waste 846 Methods 1311, 6010, and 7000.

### Sample Identification

#### START Identification No.

D-8  
D-16  
Tar 1

#### Laboratory Identification No.

L72972331-008  
L72972331-015  
L72972331-016



Data Qualifications:

I. Sample Holding Time: Acceptable

The samples were collected on September 26, 1997, and analyzed between October 7, 1997, and October 10, 1997. Analysis for mercury was performed on October 8, 1997. This is within the 6-month (28 days for mercury) holding time limit.

II. Calibration:

- Initial Calibration: Acceptable

Recoveries for the initial calibration verification were within 90 to 110% (80 to 120% for mercury), as required. The correlation coefficient for mercury exceeded 0.995.

- Continuing Calibration: Acceptable

All analytes included in the continuing calibration verification standard were within 90 to 110% (80 to 120% for mercury), as required.

III. Blanks: Acceptable

Calibration and preparation blanks were analyzed with each analytical batch. No target analytes were detected in the blanks.

IV. Overall Assessment of Data For Use: Acceptable

The overall usefulness of the data is based on criteria for QA Level II as outlined in the Office of Solid Waste and Emergency Response (OSWER) Directive 9360.4-01 (April 1990) Data Validation Procedures, Section 3.0, Metallic Inorganic Parameters. Based upon the information provided, the data are acceptable for use.

CLIENT SAMPLE ID

TAR 1

Lab Sample ID L72972331-016

Date Received: 9/30/97

**% Solids:**

Concentration Units: mg/L

FORM I - INORGANIC

100

D-16

Lab Sample ID: L72972331-014

Date Received: 9/30/97

Concentration Units: ug/L

100

## INORGANIC ANALYSIS DATA SHEET

Lab Name: AEN-IL, Inc.

**Matrix (soil/water):** Soil

Level (low/med): \_\_\_\_\_

**% Solids:** 69

CLIENT SAMPLE ID

D-8

Lab Sample ID: L72972331-008

Date Received: 9/30/97

Concentration Units: mg/Kg dry weight

[illegible]



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## M E M O R A N D U M

DATE: October 30, 1997

TO: Brendan McLennan, START Project Manager, E & E,  
Chicago, Illinois

FROM: David Hendren, START Analytical Services Manager,  
E & E, Chicago, Illinois

THROUGH: Mary Jane Ripp, START Assistant Program Manager,  
E & E, Chicago, Illinois

SUBJECT: Data Quality Review for Asbestos, Celotex,  
Wilmington, Will County, Illinois

REFERENCE: Project TDD S05-9709-007 Analytical TDD S05-9709-805  
Project PAN 7P0701SIXX Analytical PAN 7PAE01TAXX

The data quality assurance (QA) review of one tar and four solid samples collected from the Celotex site is complete. The samples were collected on September 26, 1997, by the Superfund Technical Assessment and Response Team (START) contractor, Ecology and Environment, Inc. (E & E). The samples were submitted to American Environmental Network, Schaumburg, Illinois. The laboratory analyses were performed according to polarized light microscopy (PLM) methodology.

### Sample Identification

<u>START</u> <u>Identification No.</u>	<u>Laboratory</u> <u>Identification No.</u>
Tar 1	L72972331-016
A-1	L72972331
A-2	L72972331
A-3	L72972331
A-4	L72972331

Celotex  
Project TDD S05-9709-007  
Analytical TDD S05-9709-805  
Asbestos  
Page 2

Data Qualifications:

I. Sample Holding Time: Acceptable

The samples were collected on September 26, 1997, and analyzed on October 3, 1997. The Office of Solid Waste and Emergency Response (OSWER) Directive 9360.4-01 (April 1990) does not specify holding times for this parameter.

II. Overall Assessment of Data for Use: Acceptable

The overall usefulness of the data is based on criteria for QA Level II as outlined in OSWER Data Validation Procedures, Section 9.0, Generic Data Validation Procedures. Based upon the information provided, the data are acceptable for use.



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## M E M O R A N D U M

**DATE:** October 30, 1997

**TO:** Brendan McLennan, START Project Manager, E & E,  
Chicago, Illinois

**FROM:** David Hendren, START Analytical Services Manager,  
E & E, Chicago, Illinois

**THROUGH:** Mary Jane Ripp, START Assistant Program Manager,  
E & E, Chicago, Illinois

**SUBJECT:** Data Quality Review for Flash Point and pH, Celotex,  
Wilmington, Will County, Illinois

**REFERENCE:** Project TDD S05-9709-007 Analytical TDD S05-9709-805  
Project PAN 7P0701SIXX Analytical PAN 7PAE01TAXX

The data quality assurance (QA) review of 14 drum waste samples collected from the Celotex site is complete. The samples were collected on September 26, 1997, by the Superfund Technical Assessment and Response Team (START) contractor, Ecology and Environment, Inc. (E & E). The samples were submitted to American Environmental Network, Schaumburg, Illinois. The laboratory analyses were performed according to the United States Environmental Protection Agency (U.S. EPA) Solid Waste 846 Methods 1010 and 9045.

### Sample Identification

<u>START</u> <u>Identification No.</u>	<u>Laboratory</u> <u>Identification No.</u>
D-1	L72972331-001
D-2	L72972331-002
D-3	L72972331-003
D-4	L72972331-004
D-5	L72972331-005
D-6	L72972331-006
D-7	L72972331-007
D-8	L72972331-008
D-9	L72972331-009
D-10	L72972331-010
D-12	L72972331-011
D-13	L72972331-012
D-14	L72972331-013
D-16	L72972331-014

Celotex  
Project TDD S05-9709-007  
Analytical TDD S05-9709-805  
Flash Point, pH  
Page 2

Data Qualifications:

I. Sample Holding Time: Acceptable

The samples were collected on September 26, 1997, and analyzed on September 30, 1997, for pH, and on October 6, 1997, for flash point. The Office of Solid Waste and Emergency Response (OSWER) Directive 9360.4-01 (April 1990) does not specify holding times for these parameters.

II. Calibrations: Acceptable

The calibrations for flash point and pH were verified before sample analyses. The calibration for flash point was verified using xylene, and the calibration for pH was verified following analyses of three standard solutions.

III. Overall Assessment of Data for Use: Acceptable

The overall usefulness of the data is based on criteria for QA Level II as outlined in OSWER Data Validation Procedures, Section 9.0, Generic Data Validation Procedures. Based upon the information provided, the data are acceptable for use.



Client: Ecology & Environmental  
IEA Job#: L72972331  
Project ID: S05-9709-007

**Wet Chemistry Analytes**

Lab Sample ID: 001			Matrix: Misc. Liquid		
Client ID: D-1			Sample Date: 9/26/97		

Analyte	Method	Result	PQL	Units	Date Analyzed
pH	150.1	14.9	---	pH Units	9/30/97

Lab Sample ID: 002			Matrix: Misc. Liquid		
Client ID: D-2			Sample Date: 9/26/97		

Analyte	Method	Result	PQL	Units	Date Analyzed
Flashpoint	1010	134	---	°F	10/6/97

Lab Sample ID: 003			Matrix: Misc. Liquid		
Client ID: D-3			Sample Date: 9/26/97		

Analyte	Method	Result	PQL	Units	Date Analyzed
Flashpoint	1010	>200	---	°F	10/6/97

Lab Sample ID: 004			Matrix: Misc. Liquid		
Client ID: D-4			Sample Date: 9/26/97		

Analyte	Method	Result	PQL	Units	Date Analyzed
pH	150.1	15.2	---	pH Units	9/30/97

Lab Sample ID: 005			Matrix: Misc. Liquid		
Client ID: D-5			Sample Date: 9/26/97		

Analyte	Method	Result	PQL	Units	Date Analyzed
pH	150.1	15.5	---	pH Units	9/30/97

Client: Ecology & Environmental  
IEA Job#: L72972331  
Project ID: S05-9709-007

**Wet Chemistry Analytes**

Lab Sample ID: 006			Matrix: Misc. Liquid		
Client ID: D-6			Sample Date: 9/26/97		

Analyte	Method	Result	PQL	Units	Date Analyzed
pH	150.1	13.4	---	pH Units	9/30/97

Lab Sample ID: 007			Matrix: Misc. Liquid		
Client ID: D-7			Sample Date: 9/26/97		

Analyte	Method	Result	PQL	Units	Date Analyzed
pH	150.1	13.6	---	pH Units	9/30/97

Lab Sample ID: 008			Matrix: Soil		
Client ID: D-8			Sample Date: 9/26/97		

Analyte	Method	Result	PQL	Units	Date Analyzed
pH	9045	9.54	---	pH Units	9/30/97

Lab Sample ID: 009			Matrix: Misc. Liquid		
Client ID: D-9			Sample Date: 9/26/97		

Analyte	Method	Result	PQL	Units	Date Analyzed
Flashpoint	1010	>200	---	°F	10/6/97

Lab Sample ID: 010			Matrix: Misc. Liquid		
Client ID: D-10			Sample Date: 9/26/97		

Analyte	Method	Result	PQL	Units	Date Analyzed
Flashpoint	1010	>200	---	°F	10/6/97

Client: Ecology & Environmental  
IEA Job#: L72972331  
Project ID: S05-9709-007

**Wet Chemistry Analytes**

Lab Sample ID: 011			Matrix: Misc. Liquid		
Client ID: D-12			Sample Date: 9/26/97		

Analyte	Method	Result	PQL	Units	Date Analyzed
Flashpoint	1010	>200	---	°F	10/6/97

Lab Sample ID: 012			Matrix: Misc. Liquid		
Client ID: D-13			Sample Date: 9/26/97		

Analyte	Method	Result	PQL	Units	Date Analyzed
Flashpoint	1010	81	---	°F	10/6/97

Lab Sample ID: 013			Matrix: Misc. Liquid		
Client ID: D-14			Sample Date: 9/26/97		

Analyte	Method	Result	PQL	Units	Date Analyzed
Flashpoint	1010	67	---	°F	10/10/97

Lab Sample ID: 014			Matrix: Soil		
Client ID: D-16			Sample Date: 9/26/97		

Analyte	Method	Result	PQL	Units	Date Analyzed
pH	9045	13.7	---	pH Units	9/30/97

# POLARIZED LIGHT MICROSCOPY RESULTS

AEN/IEA

STAT Client: 1270      Date Received: 10/3/97  
 STAT Batch: 74196      Date Analyzed: 10/3/97  
 Report Date: 10/3/97

Cleint Reference: L72972331

Sample #	% Type of Asbestos	Non-asbestos Components	Comments
Tar 1	---	1-5% Cellulose 90-95% Binder	Quartz 10-5%
A-1	35-40% Chrysotile	60-65% Binder	
A-2	---	1-5% Cellulose 90-95% Binder	Perlite 1-5%
A-3	5-10% Chrysotile	80-85% Binder	Glass 5-10%
A-4	15-20% Chrysotile 10-15% Amosite	65-70% Binder	

MMF: Man made Mineral Fibers

--- : Below detection limits by PLM methodology



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## M E M O R A N D U M

DATE: January 22, 1998

TO: Brendan McLennan, START Project Manager, E & E,  
Chicago, Illinois

FROM: David Hendren, START Analytical Services Manager,  
E & E, Chicago, Illinois

THROUGH: Mary Jane Ripp, START Assistant Program Manager,  
E & E, Chicago, Illinois

SUBJECT: Inorganic Data Quality Review for Resource  
Conservation and Recovery Act (RCRA) Metals, Celotex,  
Wilmington, Will County, Illinois

REFERENCE: Project TDD S05-9709-007 Analytical TDD S05-9712-804  
Project PAN 7P0701SIXX Analytical PAN 7DAD01TAXX

The data quality assurance (QA) review of two tar samples collected from the Celotex site is complete. The samples were collected on December 11, 1997, by the Superfund Technical Assessment and Response Team (START) contractor, Ecology and Environment, Inc. (E & E). The samples were submitted to NET Laboratories, Inc., Bartlett, Illinois. The laboratory analyses were performed according to the United States Environmental Protection Agency (U.S. EPA) Solid Waste 846 Methods 6010 and 7000.

### Sample Identification

<u>START</u> <u>Identification No.</u>	<u>Laboratory</u> <u>Identification No.</u>
Tar 2	448777
Tar 3	448778

### Data Qualifications:

#### I. Sample Holding Time: Acceptable

The samples were collected on December 11, 1997, and analyzed between December 17 and December 19, 1997. Analysis for mercury was performed on December 19, 1997. This is within the 6-month (28 days for mercury) holding time limit.

II. Calibration:

- Initial Calibration: Acceptable

Recoveries for the initial calibration verification were within 90 to 110% (80 to 120% for mercury), as required. The correlation coefficient for mercury exceeded 0.995.

- Continuing Calibration: Acceptable

All analytes included in the continuing calibration verification standard were within 90 to 110% (80 to 120% for mercury), as required.

III. Blanks: Acceptable

Calibration and preparation blanks were analyzed with each analytical batch. No target analytes were detected in the blanks.

IV. Overall Assessment of Data For Use: Acceptable

The overall usefulness of the data is based on criteria for QA Level II as outlined in the Office of Solid Waste and Emergency Response (OSWER) Directive 9360.4-01 (April 1990) Data Validation Procedures, Section 3.0, Metallic Inorganic Parameters. Based upon the information provided, the data are acceptable for use.



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## M E M O R A N D U M

DATE: January 22, 1998

TO: Brendan McLennan, START Project Manager, E & E,  
Chicago, Illinois

FROM: David Hendren, START Analytical Services Manager,  
E & E, Chicago, Illinois

THROUGH: Mary Jane Ripp, START Assistant Program Manager,  
E & E, Chicago, Illinois

SUBJECT: Data Quality Review for Polynuclear Aromatic  
Hydrocarbons (PAHs), Celotex, Wilmington, Will  
County, Illinois

REFERENCE: Project TDD S05-9709-007 Analytical TDD S05-9712-804  
Project PAN 7P0701SIXX Analytical PAN 7DAD01TAXX

The data quality assurance (QA) review of two tar samples collected from the Celotex site is complete. The samples were collected on December 11, 1997, by the Superfund Technical Assessment and Response Team (START) contractor, Ecology and Environment, Inc. (E & E). The samples were submitted to NET Laboratories, Inc., Bartlett, Illinois. The laboratory analyses were performed according to the United States Environmental Protection Agency (U.S. EPA) Solid Waste 846 Method 8310.

### Sample Identification

<u>START</u> <u>Identification No.</u>	<u>Laboratory</u> <u>Identification No.</u>
Tar 2	448777
Tar 3	448778

### Data Qualifications:

#### I. Sample Holding Time: Acceptable

The samples were collected on December 11, 1997, extracted on December 15, 1997, and analyzed on December 23, 1997. This is within the 14-day holding time limit, from collection to extraction, and 40-day limit from extraction to analysis.

II. Instrument Performance: Acceptable

The chromatographic resolution was adequate in the standard and sample chromatograms. Surrogate retention times were consistent in the samples and standards.

III. Calibrations:

• Initial Calibration: Acceptable

A five-point initial calibration was performed prior to analysis. The percent relative standard deviations (%RSDs) between response factors were less than 20% for all PAHs.

• Continuing Calibration: Acceptable

The percent differences of the response factors were less than 15%.

IV. Blank: Acceptable

A method blank was analyzed with the sample. No target compounds or contaminants were detected in the blank.

V. Compound Identification: Non-Applicable

There were no detected PAHs in the samples.

VI. Additional QC Checks: Acceptable

The recoveries of the surrogates used in the samples were within acceptable laboratory limits.

VII. Overall Assessment of Data for Use: Acceptable

The overall usefulness of the data is based on criteria for QA Level II as outlined in the Office of Solid Waste and Emergency Response (OSWER) Directive 9360.4-01 (April 1990), Data Validation Procedures, Section 9.0, Generic Data Validation Procedures. Based upon the information provided, the data are acceptable for use.





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## M E M O R A N D U M

DATE: January 22, 1998

TO: Brendan McLennan, START Project Manager, E & E,  
Chicago, Illinois

FROM: David Hendren, START Analytical Services Manager,  
E & E, Chicago, Illinois

THROUGH: Mary Jane Ripp, START Assistant Program Manager,  
E & E, Chicago, Illinois

SUBJECT: Data Quality Review for Polychlorinated Biphenyls  
(PCBs), Celotex, Wilmington, Will County, Illinois

REFERENCE: Project TDD S05-9709-007 Analytical TDD S05-9712-804  
Project PAN 7P0701SIXX Analytical PAN 7DAD01TAXX

The data quality assurance (QA) review of two tar samples collected from the Celotex site is complete. The samples were collected on December 11, 1997, by the Superfund Technical Assessment and Response Team (START) contractor, Ecology and Environment, Inc. (E & E). The samples were submitted to NET Laboratories, Inc., Bartlett, Illinois. The laboratory analyses were performed according to the United States Environmental Protection Agency (U.S. EPA) Solid Waste 846 Method 8082.

### Sample Identification

<u>START</u> <u>Identification No.</u>	<u>Laboratory</u> <u>Identification No.</u>
Tar 2	448777
Tar 3	448778

### Data Qualifications:

#### I. Sample Holding Time: Acceptable

The samples were collected on December 11, 1997, extracted on December 11, 1997, and analyzed on December 18, 1997. This is within the 14-day holding time limit, from collection to extraction, and 40-day limit from extraction to analysis.

II. Instrument Performance: Acceptable

The chromatographic resolution was adequate in the standard and sample chromatograms. Surrogate retention times were consistent in the samples and standards.

III. Calibrations:

• Initial Calibration: Acceptable

A five-point initial calibration was performed prior to analysis. The percent relative standard deviations (%RSDs) between response factors were less than 20% for detected PCBs.

• Continuing Calibration: Acceptable

The percent differences of the response factors were less than 15%, for detected PCBs.

IV. Blank: Acceptable

A method blank was analyzed with the sample. No target compounds or contaminants were detected in the blank.

V. Compound Identification: Acceptable

The chromatographic pattern of the PCBs identified in the samples matched those found in the standards.

VI. Additional QC Checks: Acceptable

The recoveries of the surrogates used in the samples were within acceptable laboratory limits.

VII. Overall Assessment of Data for Use: Acceptable

The overall usefulness of the data is based on criteria for QA Level II as outlined in the Office of Solid Waste and Emergency Response (OSWER) Directive 9360.4-01 (April 1990), Data Validation Procedures, Section 7.0, PCBs. Based upon the information provided, the data are acceptable for use.



# ecology and environment, inc.

International Specialists in the Environment

33 North Dearborn Street  
Chicago, Illinois 60602  
Tel. 312/578-9243, Fax: 312/578-9345

## M E M O R A N D U M

DATE: January 22, 1998

TO: Brendan McLennan, START Project Manager, E & E,  
Chicago, Illinois

FROM: David Hendren, START Analytical Services Manager,  
E & E, Chicago, Illinois

THROUGH: Mary Jane Ripp, START Assistant Program Manager,  
E & E, Chicago, Illinois

SUBJECT: Data Quality Review for Asbestos, Celotex,  
Wilmington, Will County, Illinois

REFERENCE: Project TDD S05-9709-007 Analytical TDD S05-9712-804  
Project PAN 7P0701SIXX Analytical PAN 7DAD01TAXX

The data quality assurance (QA) review of two solid samples collected from the Celotex site is complete. The samples were collected on December 11, 1997, by the Superfund Technical Assessment and Response Team (START) contractor, Ecology and Environment, Inc. (E & E). The samples were submitted to NET, Bartlett, Illinois. The laboratory analyses were performed according to polarized light microscopy (PLM) methodology, in accordance with EPA 40 CFR Part 763 Appendix A to Subpart F.

### Sample Identification

<u>START</u> <u>Identification No.</u>	<u>Laboratory</u> <u>Identification No.</u>
A5	448779
A6	448780

### Data Qualifications:

#### I. Sample Holding Time: Acceptable

The samples were collected on December 11, 1997, and analyzed on December 23, 1997. The Office of Solid Waste and Emergency Response (OSWER) Directive 9360.4-01 (April 1990) does not specify holding times for this parameter.

Celotex  
Project TDD S05-9709-007  
Analytical TDD S05-9709-805  
Asbestos  
Page 2

II. Overall Assessment of Data for Use: Acceptable

The overall usefulness of the data is based on criteria for QA Level II as outlined in OSWER Data Validation Procedures, Section 9.0, Generic Data Validation Procedures. Based upon the information provided, the data are acceptable for use.



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3548 35th Street  
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## ANALYTICAL REPORT

Mr. Dave Hendren  
ECOLOGY & ENVIRONMENT, INC  
33 N. Dearborn  
Suite 900  
Chicago, IL 60602

12/29/1997

Sample No. : 448777

NET Job No.: 97.15143

Sample Description: Building 1 Basement - Tar 2  
Cetotex 505-9709-007

Date Taken: 12/11/1997  
Time Taken: 10:25  
IEPA Cert. No. 100221

Date Received: 12/12/1997  
Time Received: 13:40  
WDNR Cert. No. 999447130

Parameter	Results	Units	Date of Analysis	Method PQL	Analyst	Batch No. Prep/Run	Analytical Method
Solids, Total	95.3	%	12/15/1997	0.1	ttl	2031	2540 (4)
Arsenic, GFAA	3.0	M+ mg/kg	12/17/1997	0.50	mhp	80 437	7060 (1)
Barium, ICP	32	mg/kg	12/18/1997	1.0	kdw	906 1633	6010B(9)
Cadmium, ICP	2.0	mg/kg	12/18/1997	0.50	kdw	906 1618	6010B(9)
Chromium, ICP	50	mg/kg	12/18/1997	2.0	kdw	906 1604	6010B(9)
Lead, ICP	100	mg/kg	12/18/1997	4.0	kdw	906 1826	6010B(9)
Mercury, CVAA	<0.042	mg/kg	12/18/1997	0.040	jtt	562 672	7471A (9)
Selenium, GFAA	<0.26	M+ mg/kg	12/17/1997	0.25	mhp	80 367	7740 (1)
Silver, AA	<2.1	mg/kg	12/17/1997	2.0	jtt	379 481	7750 (1)
Prep, 8310 PNAs NON-AQUEOUS PNA CMPDS - 8310 NONAQUEOUS	extracted		12/15/1997		bt1	621	3540 (1)
Acenaphthene	<16	mg/Kg	12/23/1997	0.660	keh	621 1494	8310 (1)
Acenaphthylene	<16	mg/Kg	12/23/1997	0.660	keh	621 1494	8310 (1)
Anthracene	<16	mg/Kg	12/23/1997	0.660	keh	621 1494	8310 (1)
Benzo(a)anthracene	<16	mg/Kg	12/23/1997	0.0026	keh	621 1494	8310 (1)
Benzo(b)fluoranthene	<16	mg/Kg	12/23/1997	0.0036	keh	621 1494	8310 (1)
Benzo(k)fluoranthene	<16	mg/Kg	12/23/1997	0.0034	keh	621 1494	8310 (1)
Benzo(a)pyrene	<16	mg/Kg	12/23/1997	0.0046	keh	621 1494	8310 (1)
Benzo(ghi)perylene	<16	mg/Kg	12/23/1997	0.051	keh	621 1494	8310 (1)
Chrysene	<16	mg/Kg	12/23/1997	0.03	keh	621 1494	8310 (1)
Dibenzo(a,h)anthracene	<16	mg/Kg	12/23/1997	0.006	keh	621 1494	8310 (1)
Fluoranthene	<16	mg/Kg	12/23/1997	0.660	keh	621 1494	8310 (1)
Fluorene	<16	mg/Kg	12/23/1997	0.14	keh	621 1494	8310 (1)
Indeno(1,2,3-cd)pyrene	<16	mg/Kg	12/23/1997	0.0086	keh	621 1494	8310 (1)
Naphthalene	<16	mg/Kg	12/23/1997	0.025	keh	621 1494	8310 (1)
Phenanthrene	<16	mg/Kg	12/23/1997	0.660	keh	621 1494	8310 (1)

M+ : Analyte quantified by MSA due to low spike recovery.

Elevated PNA reporting limits due to sample matrix.



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## ANALYTICAL REPORT

Mr. Dave Hendren  
ECOLOGY & ENVIRONMENT, INC  
33 N. Dearborn  
Suite 900  
Chicago, IL 60602

12/29/1997

Sample No. : 448777

NET Job No.: 97.15143

Sample Description: Building 1 Basement - Tar 2  
Cetotex 505-9709-007

Date Taken: 12/11/1997  
Time Taken: 10:25  
IEPA Cert. No. 100221

Date Received: 12/12/1997  
Time Received: 13:40  
WDNR Cert. No. 999447130

Parameter	Results	Units	Date of Analysis	Method PQL	Analyst	Batch No. Prep/Run	Analytical Method
Pyrene	<16	mg/Kg	12/23/1997	0.18	keh	621 1494	8310 (1)
Surr: p-Terphenyl	Diluted out	%	12/23/1997	43-125	keh	621 1494	8310 (1)
PCB'S NON-AQUEOUS - 8082							
PCB-1016	<5,000	ug/kg	12/18/1997	40	lac	215 595	8082 (1)
PCB-1221	<5,000	ug/kg	12/18/1997	40	lac	215 595	8082 (1)
PCB-1232	<5,000	ug/kg	12/18/1997	40	lac	215 595	8082 (1)
PCB-1242	10,100	ug/kg	12/18/1997	40	lac	215 595	8082 (1)
PCB-1248	<5,000	ug/kg	12/18/1997	40	lac	215 595	8082 (1)
PCB-1254	<5,000	ug/kg	12/18/1997	40	lac	215 595	8082 (1)
PCB-1260	<5,000	ug/kg	12/18/1997	40	lac	215 595	8082 (1)
Decachlorobiphenyl (Surr)	92.0	%	12/18/1997	NA	lac	215 595	8082 (1)
2,4,5,6-TCMX (Surr)	35.0	%	12/18/1997	NA	lac	215 595	8082 (1)

PCB analysis performed at a 125x dilution due to sample matrix.



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## ANALYTICAL REPORT

Mr. Dave Hendren  
ECOLOGY & ENVIRONMENT, INC  
33 N. Dearborn  
Suite 900  
Chicago, IL 60602

12/29/1997

Sample No. : 448778

NET Job No.: 97.15143

Sample Description: Building 1 Basement - Tar 3  
Cetotex 505-9709-007

Date Taken: 12/11/1997  
Time Taken: 10:35  
IEPA Cert. No. 100221

Date Received: 12/12/1997  
Time Received: 13:40  
WDNR Cert. No. 999447130

Parameter	Results	Units	Date of Analysis	Method PQL	Analyst	Batch No. Prep/Run	Analytical Method
Solids, Total	84.1	%	12/15/1997	0.1	ttl	2031	2540 (4)
Arsenic, GFAA	2.8	mg/kg	12/17/1997	0.50	mhp	80 437	7060 (1)
Barium, ICP	24	mg/kg	12/19/1997	1.0	kdw	906 1633	6010B (9)
Cadmium, ICP	0.78	mg/kg	12/18/1997	0.50	kdw	906 1618	6010B (9)
Chromium, ICP	20	mg/kg	12/18/1997	2.0	kdw	906 1604	6010B (9)
Lead, ICP	23	mg/kg	12/19/1997	4.0	kdw	906 1826	6010B (9)
Mercury, CVAA	<0.048	mg/kg	12/18/1997	0.040	jtt	562 672	7471A (9)
Selenium, GFAA	<0.30	mg/kg	12/17/1997	0.25	mhp	80 367	7740 (1)
Silver, AA	<2.4	mg/kg	12/17/1997	2.0	jtt	379 481	7760 (1)
Prep, 8310 PNAs NON-AQUEOUS PNA CMPDS - 8310 NONAQUEOUS	extracted		12/15/1997		bt1	621	3540 (1)
Acenaphthene	<24	mg/Kg	12/23/1997	0.660	keh	621 1494	8310 (1)
Acenaphthylene	<24	mg/Kg	12/23/1997	0.660	keh	621 1494	8310 (1)
Anthracene	<24	mg/Kg	12/23/1997	0.660	keh	621 1494	8310 (1)
Benzo(a)anthracene	<24	mg/Kg	12/23/1997	0.0026	keh	621 1494	8310 (1)
Benzo(b)fluoranthene	<24	mg/Kg	12/23/1997	0.0036	keh	621 1494	8310 (1)
Benzo(k)fluoranthene	<24	mg/Kg	12/23/1997	0.0034	keh	621 1494	8310 (1)
Benzo(a)pyrene	<24	mg/Kg	12/23/1997	0.0046	keh	621 1494	8310 (1)
Benzo(ghi)perylene	<24	mg/Kg	12/23/1997	0.051	keh	621 1494	8310 (1)
Chrysene	<24	mg/Kg	12/23/1997	0.03	keh	621 1494	8310 (1)
Dibenzo(a,h)anthracene	<24	mg/Kg	12/23/1997	0.006	keh	621 1494	8310 (1)
Fluoranthene	<24	mg/Kg	12/23/1997	0.660	keh	621 1494	8310 (1)
Fluorene	<24	mg/Kg	12/23/1997	0.14	keh	621 1494	8310 (1)
Indeno(1,2,3-cd)pyrene	<24	mg/Kg	12/23/1997	0.0086	keh	621 1494	8310 (1)
Naphthalene	<24	mg/Kg	12/23/1997	0.025	keh	621 1494	8310 (1)
Phenanthrene	<24	mg/Kg	12/23/1997	0.660	keh	621 1494	8310 (1)

Elevated PNA reporting limits due to sample matrix.



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## ANALYTICAL REPORT

Mr. Dave Hendren  
ECOLOGY & ENVIRONMENT, INC  
33 N. Dearborn  
Suite 900  
Chicago, IL 60602

12/29/1997

Sample No. : 448778

NET Job No.: 97.15143

Sample Description: Building 1 Basement - Tar 3  
Cetotex 505-9709-007

Date Taken: 12/11/1997  
Time Taken: 10:35  
IEPA Cert. No. 100221

Date Received: 12/12/1997  
Time Received: 13:40  
WDNR Cert. No. 999447130

Parameter	Results	Units	Date of Analysis	Method PQL	Analyst	Batch No. Prep/Run	Analytical Method
Pyrene	<24	mg/Kg	12/23/1997	0.18	keh	621 1494	8310 (1)
Surr: p-Terphenyl	Diluted out	%	12/23/1997	43-125	keh	621 1494	8310 (1)
PCB'S NON-AQUEOUS - 8082							
PCB-1016	<20,000	ug/kg	12/18/1997	40	lac	215 595	8082 (1)
PCB-1221	<20,000	ug/kg	12/18/1997	40	lac	215 595	8082 (1)
PCB-1232	<20,000	ug/kg	12/18/1997	40	lac	215 595	8082 (1)
PCB-1242	<20,000	ug/kg	12/18/1997	40	lac	215 595	8082 (1)
PCB-1248	<20,000	ug/kg	12/18/1997	40	lac	215 595	8082 (1)
PCB-1254	<20,000	ug/kg	12/18/1997	40	lac	215 595	8082 (1)
PCB-1260	<20,000	ug/kg	12/18/1997	40	lac	215 595	8082 (1)
Decachlorobiphenyl (Surr)	84.0	%	12/18/1997	NA	lac	215 595	8082 (1)
2,4,5,6-TCMX (Surr)	76.0	%	12/18/1997	NA	lac	215 595	8082 (1)

Elevated PCB reporting limits due to sample matrix.





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## ANALYTICAL REPORT

Mr. Dave Hendren  
ECOLOGY & ENVIRONMENT, INC  
33 N. Dearborn  
Suite 900  
Chicago, IL 60602

12/29/1997

Sample No. : 448779

NET Job No.: 97.15143

Sample Description: Building 1 Basement - A5  
Cetotex 505-9709-007

Date Taken: 12/11/1997  
Time Taken: 10:40  
IEPA Cert. No. 100221

Date Received: 12/12/1997  
Time Received: 13:40  
WDNR Cert. No. 999447130

Parameter	Results	Units	Date of Analysis	Method PQL	Analyst	Batch No. Prep/Run	Analytical Method
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Asbestos/Bulk

See Attached Analytical Report from NET Chicago Division



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## ANALYTICAL REPORT

Mr. Dave Hendren  
ECOLOGY & ENVIRONMENT, INC  
33 N. Dearborn  
Suite 900  
Chicago, IL 60602

12/29/1997

Sample No. : 448780

NET Job No.: 97.15143

Sample Description: Building 1 Basement - A6  
Cetotex 505-9709-007

Date Taken: 12/11/1997  
Time Taken: 10:45  
IEPA Cert. No. 100221

Date Received: 12/12/1997  
Time Received: 13:40  
WDNR Cert. No. 999447130

Parameter	Results	Units	Date of Analysis	Method PQL	Analyst	Batch No. Prep/Run	Analytical Method
Asbestos/Bulk	See Attached Analytical Report from NET Chicago Division						

S : Parameter analysis was sub-contracted to another NET location.



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Chicago, IL 60607  
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Fax: (312) 666-4355

F.D.A. EST. REG. NO. 14-16923

## ANALYTICAL REPORT

NET MIDWEST - BARTLETT  
850 W. Bartlett Road  
Bartlett, IL 60103

DATE: 12/23/1997

Attn: Mr. Brian Warner

Sample Description: #448779

Job Number: 97.04843  
Sample Number: 217017  
Date Received: 12/16/1997  
Page 1

ASBESTOS		
Sample Color	TAN	
FIBROUS ASBESTIFORMS	.	
Actinolite/Tremolite	ND	
Amosite	ND	
Anthophyllite	ND	
Chrysotile	ND	
Crocidolite	ND	
Total Fibrous Asbestiforms	ND	
OTHER FIBROUS COMPONENTS	.	
Cellulose	ND	
Fibrous Glass	3	%
Synthetics	10	%
Other	ND	
NONFIBROUS COMPONENTS	87	%

All analyses are performed in accordance with EPA 40 CFR, Part 763 Appendix A to Subpart F. ND means less than 1%, and % refers to percent by volume.

*Theresa Bednar* 12/23/97  
Theresa Bednar Date of Analysis  
Analyst

*Jaime Maceda*  
Jaime Maceda, Manager  
NET Midwest Inc.  
Chicago Division

00020



NATIONAL  
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Chicago, IL 60607  
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F.D.A. EST. REG. NO. 14-16923

## ANALYTICAL REPORT

NET MIDWEST - BARTLETT  
850 W. Bartlett Road  
Bartlett, IL 60103

DATE: 12/23/1997

Attn: Mr. Brian Warner

Sample Description: #448780

Job Number: 97.04843  
Sample Number: 217018  
Date Received: 12/16/1997  
Page 2

ASBESTOS		
Sample Color	OW	
FIBROUS ASBESTIFORMS	.	
Actinolite/Tremolite	ND	
Amosite	25	%
Anthophyllite	ND	
Chrysotile	ND	
Crocidolite	20	%
Total Fibrous Asbestiforms	45	%
OTHER FIBROUS COMPONENTS	.	
Cellulose	ND	
Fibrous Glass	ND	
Synthetics	ND	
Other	ND	
NONFIBROUS COMPONENTS	55	%

All analyses are performed in accordance with EPA 40 CFR, Part 763 Appendix A to Subpart F. ND means less than 1%, and % refers to percent by volume.

*Theresa Bednar* 12/23/97  
Theresa Bednar Date of Analysis  
Analyst

*Jaime Maceda*  
Jaime Maceda, Manager  
NET Midwest Inc.  
Chicago Division

00021

**Appendix C**

**RCMS Cost Estimate**

**CONTRACTOR/GOVERNMENT  
EQUIPMENT/PERSONNEL BY CLIN  
OTHER DIRECT COSTS  
6 PAGES**

**HAS BEEN REDACTED**

**NOT RELEVANT TO THE SELECTION OF THE REMOVAL ACTION**

Cost Summary

Page: 1

Projection Name: Baseline.EQM

Date: 01/22/98

Projection Type: Initial

Prime Contractor: EQ5

	Projection	Archive	Total
CONTRACTOR			
Personnel Cost	375010	0	375010
Equipment Cost	105824	0	105824
Other Direct Cost	2025177	0	2025177
	-----	-----	-----
Total for Contractor	2506011	0	2506011
Contractor Contingency:20.00%			501202
			-----
Including Contractor Contingency			3007213
Site Contingency:15.00%			375902
			-----
Including Site Contingency			3383115
GOVERNMENT			
Personnel Cost	181867	0	181867
Equipment Cost	9198	0	9198
Other Direct Cost	19530	0	19530
	-----	-----	-----
Total for Government	210595	0	210595
Site Contingency: 15.00%			31589
			-----
Including Site Contingency			242184
			=====
PROJECT TOTAL			3625299